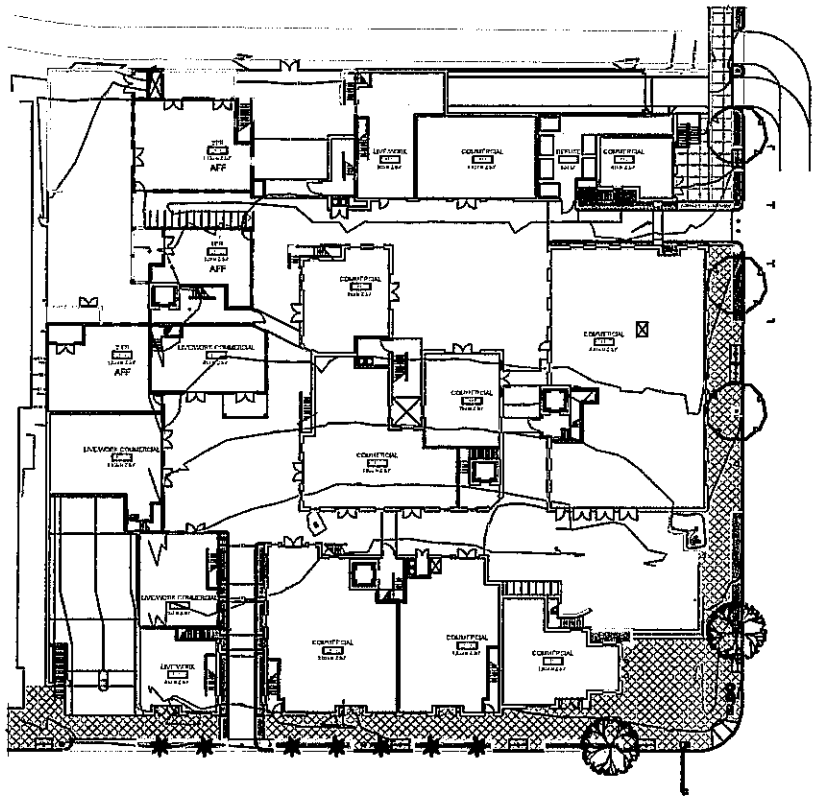
RADIO SQUARE
PRELIMINARY ACOUSTICAL STUDY
Santa Barbara, California



RK engineering group, inc.

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transportation planning • traffic engineering
acoustical engineering • parking studies

October 25, 2006

Mr. Steve Delson
DBN CARRILLO, LLC
27032 Rocking Horse Lane
Laguna Hills, CA 92653

Subject: Radio Square Preliminary Acoustical Study (Revised)

Dear Mr. Delson:

RK ENGINEERING GROUP, INC. (RK) is pleased to provide the attached preliminary acoustical study for the Radio Square project located northwest corner of Carrillo Street and De La Vina Street, in the City of Santa Barbara. This study has been prepared in response to City requirements for new developments and should be sufficient to obtain acoustical approval of the proposed project.

The attached study indicates that the proposed use is compatible with the site from a noise standpoint if the recommended noise mitigation measures are implemented. For exterior noise control, this will include noise control barriers (walls) at some units; interior noise control will require "windows closed" conditions, and potentially upgraded windows to attain the required interior noise reductions. With these design features, the project will meet the required noise standards as specified by the City of Santa Barbara.

The findings in this study are preliminary. A final noise study will need to be prepared prior to obtaining building permits for the project. That study will be utilized to finalize exterior noise requirements based upon precise grading plans and identify any additional mitigation measures that might be required to meet the City of Santa Barbara interior noise standards based upon building design and construction information.

RK is pleased to have assisted DBN on the Radio Square project and looks forward to working with you again in the future.

If you have any questions regarding this study, or would like further review, please do not hesitate to call Mike at (949) 474-0809 extension 208.

Sincerely,
RK ENGINEERING GROUP, INC.

Mike Rosa
Senior Acoustical/Transportation Planner

REGISTERED PROFESSIONAL ENGINEER
ROBERT KAHN
No. 20285
EXP: 09/30/07
CIVIL
STATE OF CALIFORNIA

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rincipal

Attachments

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JN:1512-06-08

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RADIO SQUARE PROJECT
PRELIMINARY ACOUSTICAL STUDY (REVISED)
City of Santa Barbara, California

Prepared for:

DBN CARRILLO, LLC
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Laguna Hills, CA 92653

Prepared by:

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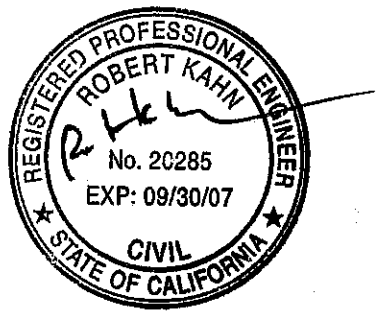

October 25, 2006

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JN:1512-06-08

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1.0 Executive Summary

A preliminary acoustical analysis and design has been completed to determine noise exposure and necessary mitigation measures for the proposed Radio Square project, which is located on the northwest corner of De La Vina Street and Carrillo Street, in the City of Santa Barbara (see Exhibit A). The results of this analysis indicate that future motor vehicle noise emanating from Carrillo Street and De La Vina Street, in addition to point source noise on two sides of the project will represent the principal source of community noise that will impact the site. The aforementioned noise impacts can be adequately mitigated with appropriate noise control measures.

Current City of Santa Barbara noise standards require that exterior noise levels be maintained at or below 60 dBA Ldn; a stringent standard when compared to the typical California exterior noise standard of 65 dBA that is used by the vast majority of cities and counties.

The results of this study indicate that at some locations the projected exterior noise levels, in worst-case scenarios, will exceed the City of Santa Barbara exterior noise standard of 60 dBA Ldn for residential uses. To reduce noise exposure to exterior living areas of the residential development, noise control barriers will be required for some units.

It is expected that the City of Santa Barbara interior noise exposure standard of 45 dBA Ldn for residential uses will also be exceeded at some units. However, the standard should be met using "windows closed" conditions and potentially upgraded building shell construction (i.e., better insulated windows). Final verification of these requirements will be based upon the final noise study, which will need to be completed prior to obtaining building permits.

A detailed list of necessary noise control measures is presented in the Summary of Mitigation Requirements section of this study, in Tables 1 and 2, and on Exhibits C-1 through C-4. The

noise control analysis and recommendations in this study are intended to satisfy City of Santa Barbara's Conditions of Approval, with respect to tentative tract maps. A report prepared by this acoustical Consultant that verifies interior and environmental noise levels are mitigated sufficiently to comply with the City of Santa General Plan Barbara Noise Element shall be submitted prior to issuance of a building permit.

2.0 Summary of Mitigation Requirements

2.1 Exterior Area Noise Exposure Control

The City of Santa Barbara noise standards for residential development require that outdoor living areas have an Ldn no greater than 60 dBA; as mentioned previously this standard is considered rather severe when compared to the typical 65 dBA that is allowed by most other cities and counties in the State of California. The findings of this study indicate that maximum future unmitigated noise impacts to this site exceed the 60 dBA Ldn exposure limit for some of the residential dwelling units.

To meet the City of Santa Barbara exterior noise standard of 60 dBA Ldn, noise barriers are required for some units that are adjacent to the aforementioned noise sources. Tables 1 and 2, and Exhibits C-1 through C-4 indicate the height and location of the individual noise control barriers necessary for the Radio Square project.

The data in Tables 1 and 2 is based upon barrier locations at the balcony boundary line of the subject units; it is important to note that the barriers' attenuation will be accomplished only if the referenced minimum height is based from the unit's finished floor elevation. Where applicable, the barriers should wrap around the ends of the balcony to prevent flanking of noise into the site. Required barrier heights and locations are detailed on Tables 1 and 2, and graphically illustrated on Exhibits C-1 and C-4.

2.2 Noise Control Barrier Construction Materials

The designed noise screening will only be accomplished if the barrier's weight is at least 3.5 pounds per square foot of face area with no decorative cutouts or line-of-sight openings between the shielded areas and roadways. The recommended noise

control barrier may be constructed using one or any combination of the following materials:

1. Masonry block;

2. Stucco veneer over wood framing (or foam core), or 1-inch thick tongue and groove wood of sufficient weight per square foot;

3. Glass (1/4-inch thick), or other transparent material with sufficient weight per square foot.

The recommended barrier must present a solid face from top to bottom. Unnecessary openings or decorative cutouts should not be made. All gaps (except for weep holes) should be filled with grout or caulking.

2.3 Interior Area Noise Exposure Control

Typical California residential building construction will provide a minimum of 12 dBA noise reduction under a "windows open" condition and a minimum of 20 dBA noise reduction under a "windows closed" condition. To obtain an interior noise level of 45 dBA Ldn, some of the dwellings adjacent to the noise sources will require "windows closed" conditions.

2.4 Unit Ventilation

Based upon this preliminary study, it is expected that the interior 45 dBA Ldn residential intrusion limit will be exceeded at some units when the operable door and window are open. Therefore, the "windows closed" condition is applicable to these units in order to meet the interior noise standard. These units are indicated on Exhibits C-1 through C-4. Attic vents facing adjacent roadways should include an acoustical baffle, or the attic floor (including the access panel) should be fully

insulated to prevent vehicle noise intrusion. Exhibit D shows a typical attic vent acoustical baffle detail.

2.5 Building Shell Design

It is expected that the interior noise exposure standard at some units in the project will only be met by using a "windows closed" condition. For proper acoustical performance, all exterior windows, doors, and sliding glass doors, in units requiring the "windows closed" condition, must have a positive seal and leaks/cracks must be kept to a minimum.

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3.0 Introduction

This study presents the results of a preliminary acoustical impact and design study for the proposed project located on the northwest corner of Carrillo Street and De La Vina Street, in the City of Santa Barbara. Included is a discussion of the expected exterior community noise environment, recommendations for control of the noise impacts to outdoor areas, as well as interior noise exposure analysis and control. A final acoustical study will address the ultimate requirements needed to meet the interior noise standards necessary to obtain building permits.

In the following sections, noise exposures expected within the planned site are reviewed and compared to the applicable noise standards. Design recommendations necessitated by the noise standards have been presented in the Summary of Mitigation Requirements section of this study.

3.1 Noise Standards

The current City of Santa Barbara Noise Element of the General Plan includes guidelines for community noise impacts for different land uses. The project's land uses are considered "noise sensitive land uses" for which City of Santa Barbara's standards limit exterior noise levels to 60 dBA Ldn in outdoor living areas and interior noise levels to 45 dBA Ldn in all habitable rooms.

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4.0 Exterior Area Noise Environmental Analysis

Exhibit B shows the location of the proposed project in relation to the subject roadways. It is expected that the primary source of noise impacts to the site will be traffic noise emanating from Carrillo Street and De La Vina Street. In addition, there are two point-sources of stationary noise that will affect the project; the first is a Ralph's loading dock and mechanical equipment located on the east side of De La Vina Street, across from the project. The second source of stationary noise is a HVAC unit mounted on the roof of a Sav-On that is adjacent to the west side of the project; both can be adequately mitigated against. Other roadways (including the SR-101 Freeway that is located approximately 1,500 feet from the project site) are not expected to contribute to the noise impacts for this project due to their distance, lower volume/speed, and/or shielding by building structures between the site and these streets. It is expected that railroad noise will make no contribution to the development's noise environment.

The expected future roadway noise impacts were projected using a version of the Federal Highway Administration (FHWA) Traffic Noise Prediction Model (FHWA-RD-77-108), together with several key roadway and site parameters. Key inputs include roadway classification, roadway active width (the distance between the center of the outer most travel lanes on each side of the roadway); buildout roadway volumes (year 2030); travel speed; percentages of automobiles, medium trucks and heavy trucks in the roadway volume; roadway grade; angle of view; site conditions ("hard" or "soft"); and percent of total average daily traffic (ADT) which flows each hour throughout a 24-hour period.

Based upon information from various sources (refer to Table 4 footnotes for specifics), Carrillo Street will have a year 2030 ADT 35,400 that travels at a speed of 30 mile per hour; De La Vina Street will have a year 2030 ADT of 13,300 that travels at a speed of 25 miles per hour. A summary of the roadway and site parameter values used to project maximum future roadway noise impacts to the Radio Square project is presented in Table 4.

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5.0 Exterior Area Noise Exposure Analysis and Control

The City of Santa Barbara standards for residential land use require that noise exposures in all usable outdoor areas not exceed 60 dBA Ldn. Analysis of and recommendations for control of motor vehicle and point source noise impacts to outdoor living areas are presented in this section.

As mentioned previously in this study, there are multiple sources of noise within the project site, and with four floors of living/retail spaces that include balconies that face different directions, mitigation is difficult to sum up; hence Tables 1 and 2 and Exhibits C-1 through C-4. These tables and exhibits clearly indicate the locations and heights of the required barriers. It is important to note that for clarification the exhibits do not indicate the recommended mitigation to reduce noise levels from the adjacent HVAC unit on the roof of the Sav-On; Table 2 includes a separate and complete listing of all balconies affected by the HVAC noise impacts and the results the various mitigation methods would have (with the exception of relocating the HVAC unit). The owner of the Sav-On building has indicated that he will assist in mitigating the HVAC unit noise, since it is an issue with his own building. The aforementioned methods range from constructing barriers at the balconies only, constructing barriers around the HVAC unit only, and a combination of both (the combination being the best of the three shown). A fourth method has been examined and deemed to be the best overall, that is to move the HVAC unit to a less exposed area of the Sav-On building's roof. Projected impacts were not figured for this method due to the many variables involved; however, it is the highest recommended option as it holds the most promise for results based on distance. Using the relocation method some balcony barriers would still likely have to be constructed, but the required heights would be significantly reduced. In addition, DBN has met with the current Sav-On owners and the owners are in favor of supporting the options listed above. If the relocation method is selected, noise impacts can be calculated to determine the best

location. Once the required barriers are constructed it is expected that the residential outdoor useable space's noise-exposure levels will be less than the 60 dBA Ldn limit.

5.1 Construction Noise

Noise impacts from construction activities of the proposed project are a function of the noise generated by construction equipment, the equipment location, the sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Construction activity for the proposed project was examined in three distinct phases. Each phase can be characterized by the following operations: (1) clearing/excavation, (2) building foundation, and (3) building construction. The Environmental Protection Agency (EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment. Noise levels from the sources decrease with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. Noise levels in the immediate vicinity of the construction area would increase during proposed project construction activities. Short-term noise impacts associated with grading and construction activities could result in noise levels ranging between 76 dBA to 100 dBA measured 50 feet from the noise source. These noise levels would exceed the short-term 60 dBA CNEL threshold and should therefore be considered a potentially significant impact, however, they can be mitigated based upon the various techniques mentioned later in this report.

Demolition activities, clearing, grading, hauling, framing, and completion of the building construction on-site would create short-term noise increases over 60 dBA perceived by sensitive noise receptors located within 1,600 feet of the project parcel. Noise sensitive receptors including residential units north of the project site would potentially perceive short-term noise increases when: (1) construction vehicles would enter and leave the site (with workers, building materials, or construction equipment); (2) activities would occur in construction staging areas; (3) during operation of

temporary on-site generators; (4) grading activities occur; and (5) during building construction. The intensity of potential noise impacts would depend upon the proximity of the noise receiver to the area under construction, the number and type of construction equipment operating each day, and the length of time each piece of equipment would be in use. Impacts on noise would be temporary, but potentially significant.

Noise barriers will need to be defined (type and place) or the mitigation contained in the report should be changed to require a noise barrier (or some other name) plan to be prepared by the noise consultant that verifies that construction noise levels are reduced to the most reasonable extent possible and said plan is to be submitted prior to issuance of a building permit for verification by the City. The following preliminary measures have been identified and would minimize the short-term potential construction noise impacts from the project upon adjacent land uses:

1. Construction activity for site preparation and for future development shall be limited to the hours of 7:00 a.m. to 8:00 p.m., Monday through Friday. No construction shall occur on City Holidays. Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities (e.g., painting, landscaping with hand tools, etc.) are not subject to these restrictions.

2. Stationary construction equipment that generates noise that exceeds 60 dBA at the project boundaries shall be shielded with the most modern and effective noise control devices (i.e., mufflers, lagging, and/or motor enclosures). All equipment shall be properly maintained to ensure that no additional noise, due to worn or improperly maintained parts, would be generated.

3. The project applicants shall notify the sensitive noise receptors two weeks to one month in advance of any and all construction activities. The construction manager's (or representative's) telephone number shall also be provided with the notification so that community concerns can be communicated.

4. Stockpiling and vehicle staging areas shall be located as far as practical from sensitive noise receptors. Every effort shall be made to create the greatest distance between noise sources and sensitive receptors during construction activities.

5. The project shall comply with Section 9.16.015 of the noise section of the City's Municipal Code.

6. A report prepared by the Acoustical Consultant that verifies construction noise levels are reduced to the most reasonable extent possible shall be submitted prior to issuance of a building permit.

6.0 Interior Area Noise Exposure Analysis and Control

Interior noise exposure is the difference between the projected exterior dBA Ldn exposure at the structure's facade and the noise reduction provided by the structure itself. Typical building construction will provide an approximate 12 dBA noise reduction with "windows open" and a minimum 20 dBA noise reduction with "windows closed".

An analysis has been made of the anticipated conservative interior noise levels within the project site. The results of this analysis indicate that the interior noise levels will range from 51.9 to 61.0 dBA Ldn with "windows open" and 43.9 to 53 dBA Ldn with "windows closed". Table 3 provides a summary of the interior noise impacts and necessary reductions. To obtain interior noise levels of 45 dBA Ldn, as required by the City of Santa Barbara, some units adjacent to the subject noise sources will require the "windows closed" condition.

Non-specific noise reduction calculations for the Radio Square project were used to estimate "windows closed" conditions at selected units. When the final acoustical study is performed, in depth interior noise reduction calculations will be determined based on detailed floor and elevation plans for accurate and specific expected interior noise levels.

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7.0 Conclusions

A preliminary acoustical analysis has been completed for the proposed Radio Square project. This analysis indicates that the future noise environment is expected to be dominated by vehicle noise emanating from Carrillo Street and De La Vina Street, in addition to noise emanating from the nearby Ralph's and adjacent Sav-On. The noise control findings show that the 60 dBA Ldn residential outdoor exposure noise limit is expected to be met with the construction any one of the noise control mitigation methods offered in this study. Compliance with the 45 dBA Ldn residential interior noise standard and the *California Noise Insulation* standards are expected to be met with typical mitigation methods, and will be confirmed when the final acoustical study is completed.

The analysis and design presented in this study comply with applicable City of Santa Barbara requirements for control of community noise impacts for outdoor and indoor living areas.

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Exhibits

Exhibit A

Location Map

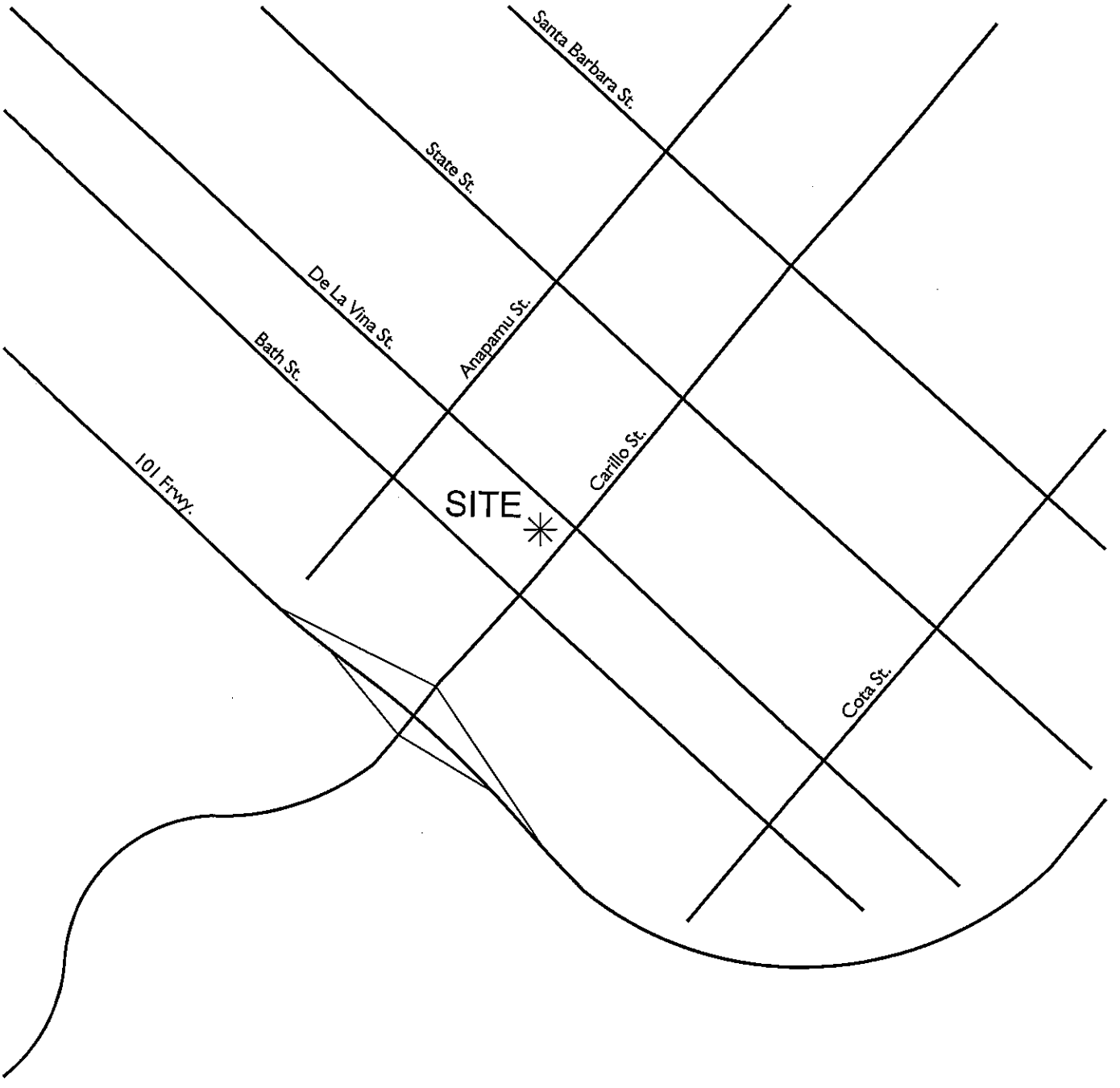

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Exhibit B
Site Plan

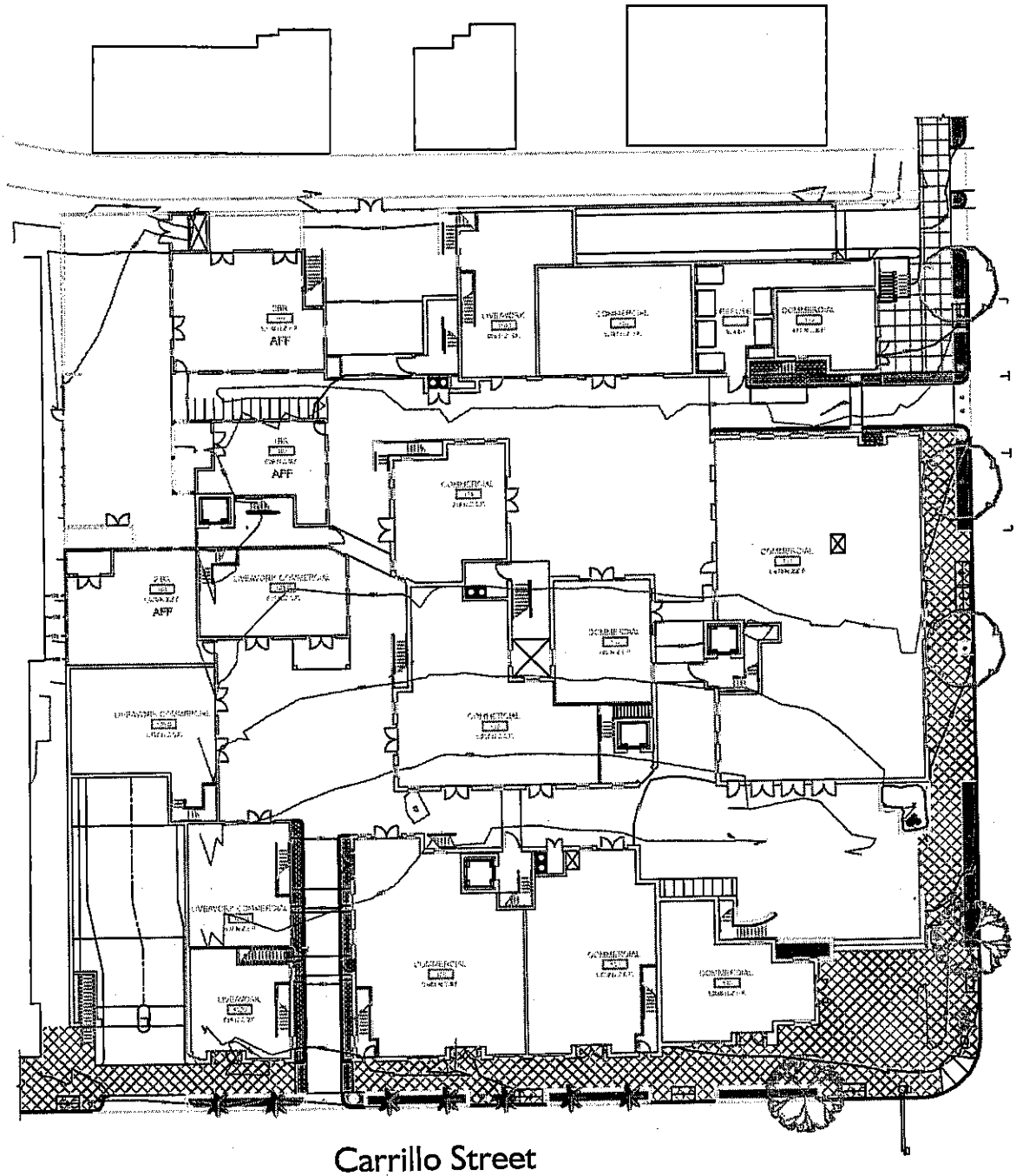

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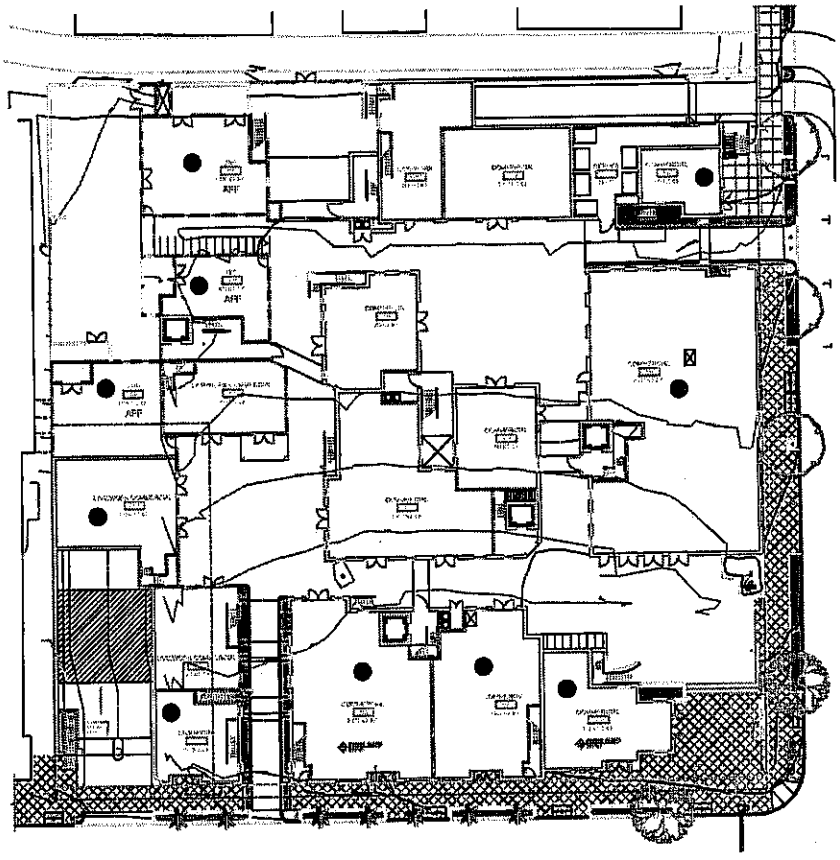
Exhibit C-1

Required Noise Mitigation Measures

First Floor

NOTE:

- Since multiple mitigation methods are being offered to reduce noise impacts emanating from the Sav-On HVAC unit, the requirements are detailed on Table 3.
- There are no qualifying exterior liveable spaces (i.e. balconies or comimunity areas) that are directly impacted on the ground level of the project.
- Units 101 and 102 will likely NOT require the "windows closed" conditions if the HVAC unit is relocated from its current position on the Sav-On rooftop.



Legend:

● = Unit Requires a "Windows Closed" Condition Necessitating a means of mechanical fresh-air Ventilation, See Summary of Mitigation Requirements Section of this Report for More Detailed Information

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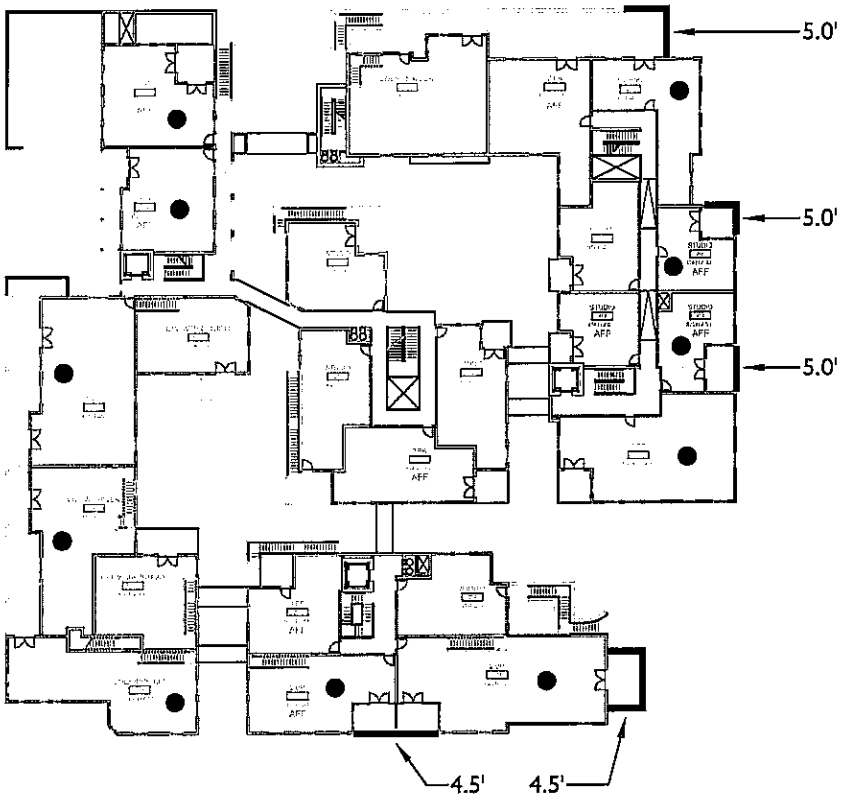
Exhibit C-2

Required Noise Mitigation Measures

Second Floor

NOTE:

- Since multiple mitigation methods are being offered to reduce noise impacts emanating from the Sav-On HVAC unit, the requirements are detailed on Table 3.
- Units 201 and 202 will likely NOT require the "windows closed" conditions if the HVAC unit is relocated from its current position on the Sav-On rooftop.



Legend:

● = Unit Requires a "Windows Closed" Condition Necessitating a means of mechanical fresh-air Ventilation, See Summary of Mitigation Requirements Section of this Report for More Detailed Information

▬ = Noise Control Barrier Required (minimum height indicated in feet)

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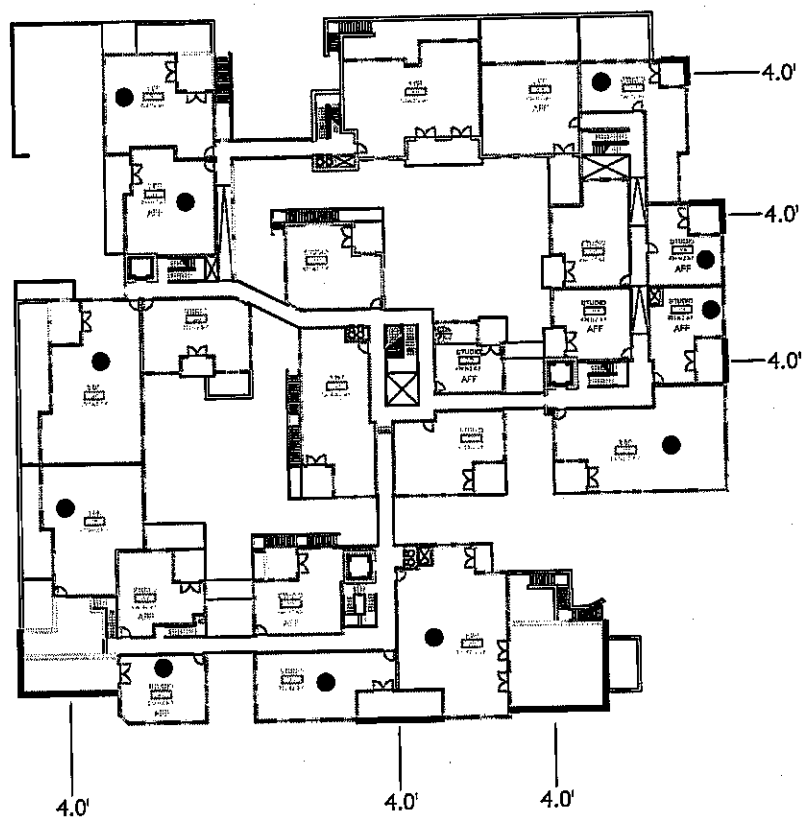
Exhibit C-3

Required Noise Mitigation Measures

Third Floor

NOTE:

- Since multiple mitigation methods are being offered to reduce noise impacts emanating from the Sav-On HVAC unit, the requirements are detailed on Table 3.
- Units 301 and 302 will likely NOT require the "windows closed" conditions if the HVAC unit is relocated from its current position on the Sav-On rooftop.



Legend:

● = Unit Requires a "Windows Closed" Condition Necessitating a means of mechanical fresh-air Ventilation, See Summary of Mitigation Requirements Section of this Report for More Detailed Information

▬ = Noise Control Barrier Required (minimum height indicated in feet)

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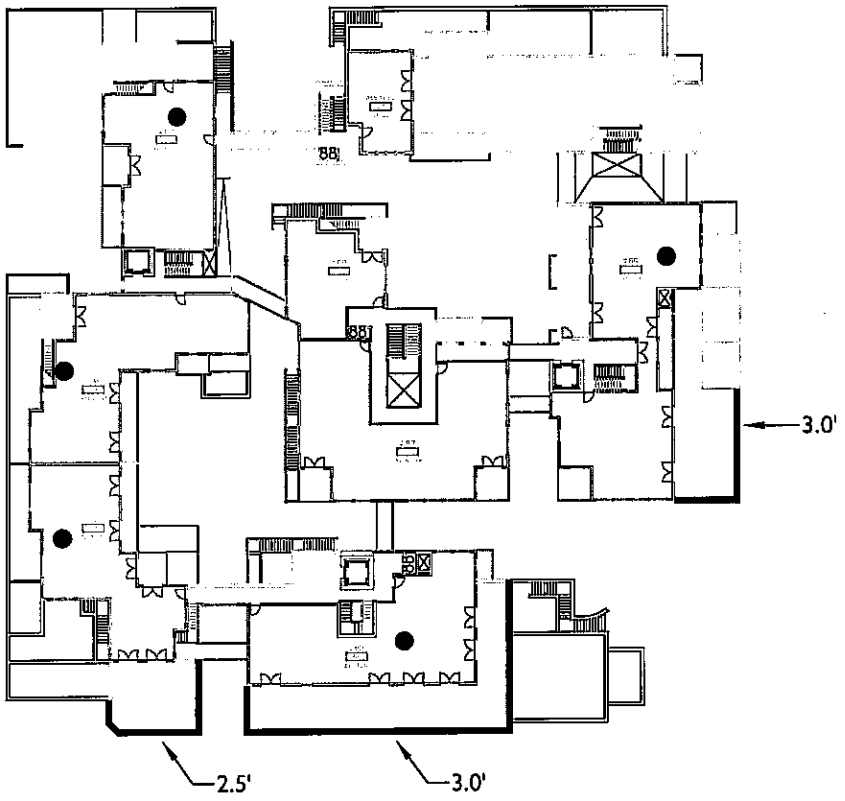
Exhibit C-4

Required Noise Mitigation Measures

Fourth Floor

NOTE:

- Since multiple mitigation methods are being offered to reduce noise impacts emanating from the Sav-On HVAC unit, the requirements are detailed on Table 3.
- Unit 401 will likely NOT require the "windows closed" condition if the HVAC unit is relocated from its current position on the Sav-On rooftop.



Legend:

● = Unit Requires a "Windows Closed" Condition Necessitating a means of mechanical fresh-air Ventilation, See Summary of Mitigation Requirements Section of this Report for More Detailed Information

▬ = Noise Control Barrier Required (minimum height indicated in feet)

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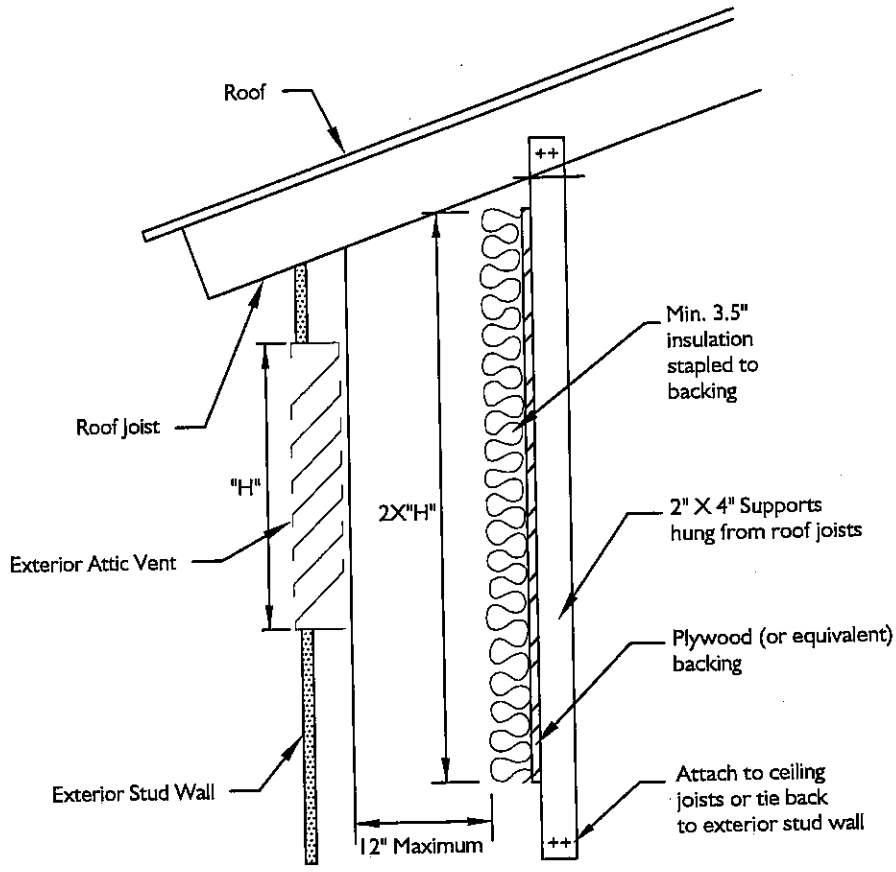
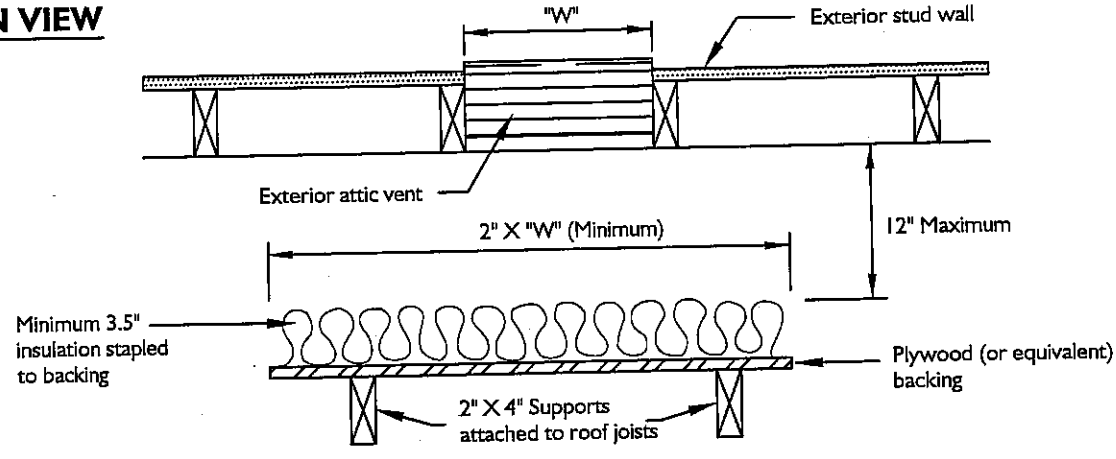
Exhibit D

Attic Vent Acoustical Baffle Detail

SECTION



PLAN VIEW



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Tables

TABLE 1

Future Exterior Noise Levels - Roadways and Ralph's (dBA Ldn)[1]

Impacted Units' Balconies	Floor	Unmitigated Exterior Noise Level From[2]				Noise Barrier Minimum Height (in feet)[3]	Final Projected Exterior Noise Level
		Carrillo Street	De La Vina Street	Ralph's Mech. Equip. and Loading Docks	All Sources (combined)		
208	2	69.4	--	--	69.4	4.5	59.3
214		--	62.3	59.0	64.0	5.0	59.9
311	3	67.9	60.4	--	68.6	4.0	59.2
314		--	63.1	59.0	64.5	4.0	60.0
404	4	67.6	--	--	67.6	2.5	58.9
405		--	62.5	59.0	64.1	3.0	59.7

[1] There are no qualifying first-floor exterior livable spaces that required analysis, hence only floors 2 through 4 are indicated.

[2] "--" indicates no noise impacts from corresponding noise source.

[3] Barrier height (shown in feet) is to be above the corresponding unit's finished floor elevation.

TABLE 2[1]

Future Exterior Noise Levels - Sav-On HVAC Unit (dBA Ldn)

Unit Balcony	Floor	HVAC Noise Impact	Minimum Noise Barrier Height (in feet) if Barrier is Located at:				Mitigated Noise Level[3]
			Balcony Only	HVAC Unit Only	Both HVAC and Balcony[2]		
					HVAC Unit	Balcony	
104	1	60.7	6.5	12.0	6.5	--	<60.0
105R	2	73.3	11.5	12.0	6.5	6.0	<60.0
107R	2	74.1	12.5	12.0	6.5	6.0	<60.0
204	2	65.5	6.5	12.0	6.5	--	<60.0
304	3	61.1	5.0	12.0	6.5	--	<60.0
305	3	74.1	9.0	12.0	6.5	4.0	<60.0
307	3	71.7	8.0	12.0	6.5	4.0	<60.0
401	4	61.1	5.0	12.0	6.5	--	<60.0
402	4	66.1	5.0	12.0	6.5	--	<60.0

All Units HVAC Impacted Balcony's Requiring Mitigation Barriers

Unit	Floor	Minimum Required Barrier Height According to Mitigation Method (in feet)			
		at Balcony Only	at HVAC Unit Only	at HVAC and Balcony	
				HVAC	Balcony
102	1	6.5	12.0	6.0	--
104		6.5	12.0	6.0	--
105R	2	11.5	12.0	6.0	6.0
107R		12.5	12.0	6.0	6.5
202		6.5	12.0	6.0	--
204		6.5	12.0	6.0	--
302	3	5.0	12.0	6.0	--
304		5.0	12.0	6.0	--
305		9.0	12.0	6.0	4.0
307		8.0	12.0	6.0	4.0
401	4	5.0	12.0	6.0	--
402		5.0	12.0	6.0	--

[1] Adjacent Sav-On roof-mounted HVAC unit noise impacts are listed in this separate table, as these units are not impacted by the other noise sources cited in this study.

[2] Relocation of the HVAC is ultimately the best method of mitigation (not shown), however of the three types of mitigation shown here, the combination barriers (at HVAC and Balconies) is most preferred.

[3] All of the presented noise mitigation methods bring the adjacent Sav-On's roof mounted HVAC unit's noise impacts into compliance, however with differing results; see Appendix C for individual results.

TABLE 3

Future Interior Noise Levels (dBA Ldn)

Lot	Floor	Noise Impact at Facade[1]	Minimum Required Interior Noise Reduction	Calculated Interior Noise Level Using Standard California Construction Windows (STC = 25)		Minimum Required STC Rating for Corresponding Unit[2]
				"Windows Open"	"Windows Closed"	
107C	1	68.8	23.8	56.8	48.8	>25
110		69.8	24.8	57.8	49.8	>25
111		65.3	20.3	53.3	45.3	>24
208	2	70.0	25.0	58.0	50.0	>25
214		62.7	17.7	50.7	42.7	>25
311	3	69.0	24.0	57.0	49.0	>25
314		63.5	18.5	51.5	43.5	>25
404	4	67.1	22.1	55.1	47.1	>25
405		62.2	17.2	50.2	42.2	>25

[1] Indicated noise impacts could be from multiple sources; see Appendicies B and C for individual calculation information.

[2] It is assumed that the indicated STC window rating will be sufficient for most units, however, this must be confirmed in the final acoustical study that will need to be performed prior to obtaining building permits.

TABLE 4

Roadway Parameters and Vehicle Distribution

Roadway	Lanes	Buildout ADT[1]	Speed (MPH)	Site Conditions
Carrillo Street	5	35,400	30	Hard
De La Vina Street	4	13,300	25	Hard

Vehicle Distribution (Truck Mix)[1]

	Vehicle Type	Daytime % (7 AM to 7 PM)	Evening % (7 PM to 10 PM)	Night % (10 PM to 7 AM)	Total % of Traffic Flow
Carrillo Street & De La Vina Street	Automobiles	77.5	12.9	9.6	97.42
	Medium Trucks	84.8	4.9	10.3	1.84
	Heavy Trucks	86.5	2.7	10.8	0.74

[1] Source: Acoustical Analysis Report (Draft R1) Radio Square, prepared by McKay Conant Brook, Inc., dated June 9, 2006.

Appendices

Appendix A

City of Santa Barbara Comments
On Original Acoustical Study

Radio Square
Noise Study

City of Santa Barbara
Planning Division

30-DAY DEVELOPMENT APPLICATION REVIEW TEAM (DART) COMMENTS

July 14, 2006

Steve Yates
Conceptual Motion Company
1501 Chapala Street
Santa Barbara, CA 93101

SUBJECT: 30-DAY DEVELOPMENT APPLICATION REVIEW FOR 210 W. CARRILLO ST., MST#2005-00722

DART MEETING DATE: Wednesday, July 19, 2006 at 1:15 p.m. – 2:30 p.m., 630 Garden Street, Housing & Redevelopment Conference Room, 2nd Floor

Dear Mr. Yates:

I. INTRODUCTION

The City accepted the development application for the subject project for 30-day review on June 16, 2006. The project consists of demolishing the Radio Square commercial site containing 18,547 square feet of various retail and service commercial uses and constructing a four-story mixed use project with 55 residential units and 18,530 square feet of commercial space. The commercial space would include 14,265 square feet of retail commercial space in nine commercial condominiums and 4,265 square feet of live/work commercial and office space located in five ground-floor units. Subterranean parking is proposed with a total of 176 parking spaces. Vehicular access to and from the parking area is proposed with an entrance and exit ramps along Carrillo Street and De la Vina Street.

A pre-application was received and reviewed by Staff in November of 2005 for a mixed-use project. The Historic Landmarks Commission (HLC) conceptually reviewed the proposed development on May 3, 2006. The Planning Commission reviewed the project on May 4, 2006. Based on input from Staff and the City's reviewing bodies, the project was modified to its current form.

The information reviewed by the DART included a Proposed Traffic Plan (construction) prepared by American Integrate Services, Inc., (not dated) and R&G builders dated June 12, 2006; a Phase I Traffic and Parking Study prepared by Associated Transportation Engineers, dated June 15, 2006; a Preliminary Foundation Investigation prepared by Pacific Materials

Laboratory, dated February 15, 2006; a Preliminary Geologic Hazards Evaluation prepared by Campbell-Geo, Inc., dated May 25, 2006; a Site remediation mandate prepared by the California Regional Water Quality Control Board (CRWQCB), dated January 7, 2005; a hazardous material site remediation letter prepare by Kennedy/Jenks, dated June 14, 2006; a Phase I Archaeological Resources Report prepared by Stone Archaeological Consulting, dated June, 2006; an Arborist Report prepared by Bill Spiewak, dated March 27, 2006; an Acoustical Analysis Report prepared by McKay Conant Brook, dated June 2006; a Fire Protection/Life Safety and ADA Narrative prepared by Schirmer Engineering, dated June 8, 2006; and a plan set prepared by the Conceptual Motion Company, dated June 14, 2006.

The City has 30 days from the date a development application is accepted for processing to determine if the application is "complete" (i.e. contains all of the required information necessary for project analysis and decision). During the 30-day application review period, the development application is forwarded to various City land development departments and divisions for their review, comments, and completeness determination. The City is required to notify a project proponent within the 30-day application review period of its determination as to development application completeness.

If a development application is determined to be "incomplete," the City will specify in writing to the project proponent the additional information required. The application will be placed "on-hold" until the required information is received. Not later than 30 days from receipt of the additional information, the City will again determine if the application is "complete." If the application remains incomplete, the City will again transmit its determination to the project proponent and specify the additional information required. If the City determines the application is "complete", further processing shall commence. Further processing includes environmental review of the proposed project, analysis for compliance with applicable plans, policies, ordinances, codes, etc., and action on the proposed project application by the appropriate decision-making body(ies).

Also, during the 30-day application review period, I was assigned as the lead contact regarding this project. Any questions or concerns you may have relative to the processing of the development application should be directed to me at (805) 564-5470.

II. COMPLETENESS DETERMINATION

The purpose of this letter is to notify you that the development application for the subject project is "incomplete," and additional information is required. The required additional information is specified below.

III. REQUIRED ADDITIONAL INFORMATION

Staff has identified the following information as necessary in order to adequately review the proposed development project. **Subsequent applications will not be accepted without this information.**

A. Planning Division

1. The Acoustical Analysis Report incorrectly identifies the document and policies governing the standards within the City as the County of Santa Barbara

Noise Element. Revise the report to reflect the City of Santa Barbara Noise Element and policies. The report needs to include the noise impacts to both interior and exterior (patios and decks) residential spaces. Note that the City's policy standard is more stringent than that of the County. The City threshold for impacts to exterior residential space is 60 Ldn not 65.

Relative to mitigation measures already identified, holidays cited should be City holidays, not state holidays. Notification to adjacent properties of pending construction should be two weeks to a month prior to construction. Noise barriers need to be defined (type and place) or the mitigation should be changed to require a noise barrier (or some other name) plan to be prepared by the noise consultant that verifies that construction noise levels are reduced to the most reasonable extent possible and said plan is to be submitted prior to issuance of a building permit.

On page seven a reference is made that rail is not in the project vicinity. It is a few blocks away, although the freeway most likely is the dominant noise source. The report should be amended to correctly reflect this fact.

2. Update the plan sheet G001 and the next to last page of the DART Application Letter item 5. Currently the plans indicate a square footage of 18,530 square feet while the letter indicates 19,088 square feet.

3. Provide information and documentation, if any, of the meeting with the Regional Water Quality Control Board (RWQCB) regarding the site conditions and the preparation of a Corrective Action Plan (CAP). The CAP should be submitted to the Count Protection Services Division. If CAP has already been submitted to the County, please provide the assigned case person.

Also, The Preliminary Foundation Investigation report indicates that, in order to construct the underground parking, dewatering will be required. Provide where the water will be discharged and information regarding obtaining permits from the RWQCB

4. Correct the project description figures on page 1 of the Traffic and Parking Study. The live work net square footage is listed as 14,625 instead of 14,265 and the total gross commercial square footage is shown as 18,503 instead of 18,530.

5. Staff is unable to complete a determination of the project's visual impacts (including cumulative impacts in the Carrillo and Chapala area). Provide a conceptual/perspective representation of the project from various points of view including from Highway 101.

6. Amend the Geologic Hazards Evaluation (page 2) to reflect the City of Santa Barbara Seismic Safety Element instead of the County's.

B. Engineering Division

Recycling and Trash:

1. Add to site plans:

Appendix B

Roadway Noise Impact Calculations

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	Carillo	DATE:	15-Sep-06
LOCATION:	Unit 107C (1st Floor Facade) - no wall	BY:	Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	51		
DIST N/F=	36	AUTO SLE DISTANCE =	47.98
DT WALL=	51	MED TRUCK SLE DIST=	47.79
DT W/OB=	0	HVY TRUCK SLE DIST=	47.81
HTH WALL=	0.0 ********		
OBS HTH=	5.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	67.9	66.0	64.3	58.2	66.8
MEDIUM TRUCKS LEQ	61.3	59.8	53.4	51.9	60.3
HEAVY TRUCKS LEQ	63.0	61.6	52.5	53.8	62.1
VEHICULAR NOISE	69.8	68.1	64.9	60.2	68.8

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	69.8	68.1	64.9	60.2	68.8

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	69.8		69.8
MIT PK HR LEQ WITH TOPO AND BARRIER =	69.8	*******	69.8
LDN WITHOUT TOPO AND BARRIER =	68.8		68.8
MIT LDN WITH TOPO AND BARRIER =	68.8	*******	68.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	Carillo	DATE:	15-Sep-06
LOCATION:	Unit 110 (1st Floor Facade) - no wall	BY:	Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	51		
DIST N/F=	36	AUTO SLE DISTANCE =	47.98
DT WALL=	51	MED TRUCK SLE DIST=	47.79
DT W/OB=	0	HVY TRUCK SLE DIST=	47.81
HTH WALL=	0.0 ********		
OBS HTH=	5.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	67.9	66.0	64.3	58.2	66.8
MEDIUM TRUCKS LEQ	61.3	59.8	53.4	51.9	60.3
HEAVY TRUCKS LEQ	63.0	61.6	52.5	53.8	62.1
VEHICULAR NOISE	69.8	68.1	64.9	60.2	68.8

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	69.8	68.1	64.9	60.2	68.8

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	69.8		69.8
MIT PK HR LEQ WITH TOPO AND BARRIER =	69.8	*******	69.8
LDN WITHOUT TOPO AND BARRIER =	68.8		68.8
MIT LDN WITH TOPO AND BARRIER =	68.8	*******	68.8

NOISE LEVEL ADDITION (dBA)

Unit 110 (Commercial) - Roadways + Ralph's Mechanical/Truck Deliveries

at Facade (unmitigated)

Street Name	Noise Level (dBA)	10^dBA/10
Carrillo	68.8	7,585,775.8
De La Vina	60.9	1,230,268.8
Ralph's louvers/Truck del.	59.0	794,328.2
Combined Noise Level (dBA) =	69.8	9,610,372.8

Total Combined Noise Impacts to			
At Facade			
69.8	N/A	N/A	N/A

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 110 (1st Floor Facade) - no wall	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	75		
DIST N/F=	24	AUTO SLE DISTANCE =	74.20
DT WALL=	75	MED TRUCK SLE DIST=	74.08
DT W/OB=	0	HVY TRUCK SLE DIST=	74.09
HTH WALL=	0.0 ********		
OBS HTH=	5.0		
AMBIENT=	0.0 (Raplph's louvers)		
ROADWAY VIEW:	LF ANGLE= -90		
	RT ANGLE= 90		
	DF ANGLE= 180		

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	59.5	57.6	55.8	49.8	58.4
MEDIUM TRUCKS LEQ	53.9	52.4	46.0	44.5	53.0
HEAVY TRUCKS LEQ	56.1	54.7	45.7	46.9	55.3
VEHICULAR NOISE	61.9	60.2	56.6	52.4	60.9

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	61.9	60.2	56.6	52.4	60.9

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	61.9		61.9
MIT PK HR LEQ WITH TOPO AND BARRIER =	61.9	*******	61.9
LDN WITHOUT TOPO AND BARRIER =	60.9		60.9
MIT LDN WITH TOPO AND BARRIER =	60.9	*******	60.9

NOISE LEVEL ADDITION (dBA)

Unit 111 (Commercial) - Roadways + Ralph's Mechanical/Truck Deliveries

at Facade (unmitigated)

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	64.2	2,630,268.0
Ralph's Mech+Truck Del.	59.0	794,328.2
Combined Noise Level (dBA) =	65.3	3,424,596.2

Total Combined Noise Impacts to			
At Facade			
65.3	N/A	N/A	N/A

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 111 (1st Floor Facade) - no wall	BY:	Mike Rosa

ADT =	13,300			PK HR VOL =	1,330
SPEED =	25				
PK HR % =	10				
CTL DIST=	36				
DIST N/F=	24			AUTO SLE DISTANCE =	34.31
DT WALL=	36			MED TRUCK SLE DIST=	34.05
DT W/OB=	0			HVY TRUCK SLE DIST=	34.07
HTH WALL=	0.0	********			
OBS HTH=	5.0				
AMBIENT=	0.0	(Raplph's louvers)			
ROADWAY VIEW:		LF ANGLE=	-90		
		RT ANGLE=	90		
		DF ANGLE=	180		

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	62.8	60.9	59.2	53.1	61.7
MEDIUM TRUCKS LEQ	57.3	55.8	49.4	47.9	56.3
HEAVY TRUCKS LEQ	59.5	58.1	49.0	50.3	58.6
VEHICULAR NOISE	65.3	63.5	60.0	55.7	64.2

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	65.3	63.5	60.0	55.7	64.2

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	65.3		65.3
MIT PK HR LEQ WITH TOPO AND BARRIER =	65.3	*******	65.3
LDN WITHOUT TOPO AND BARRIER =	64.2		64.2
MIT LDN WITH TOPO AND BARRIER =	64.2	*******	64.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	Carrillo	DATE:	15-Sep-06
LOCATION:	Unit 208 - Balcony (no wall)	BY:	Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	41		
DIST N/F=	36	AUTO SLE DISTANCE =	41.92
DT WALL=	36	MED TRUCK SLE DIST=	40.87
DT W/OB=	5	HVY TRUCK SLE DIST=	38.74
HTH WALL=	0.0 ********		
OBS HTH=	20.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	68.5	66.6	64.8	58.8	67.4
MEDIUM TRUCKS LEQ	62.0	60.5	54.1	52.6	61.0
HEAVY TRUCKS LEQ	63.9	62.5	53.4	54.7	63.1
VEHICULAR NOISE	70.5	68.7	65.5	60.9	69.4

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	70.5	68.7	65.5	60.9	69.4

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	70.5		70.5
MIT PK HR LEQ WITH TOPO AND BARRIER =	70.5	*******	70.5
LDN WITHOUT TOPO AND BARRIER =	69.4		69.4
MIT LDN WITH TOPO AND BARRIER =	69.4	*******	69.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	Carrillo	DATE:	15-Sep-06
LOCATION:	Unit 208 - Balcony (w/wall)	BY:	Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	41		
DIST N/F=	36	AUTO SLE DISTANCE =	41.80
DT WALL=	36	MED TRUCK SLE DIST=	40.63
DT W/OB=	5	HVY TRUCK SLE DIST=	38.25
HTH WALL=	19.5 (4.5')		
OBS HTH=	20.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	68.5	66.6	64.9	58.8	67.4
MEDIUM TRUCKS LEQ	62.0	60.5	54.1	52.6	61.1
HEAVY TRUCKS LEQ	64.0	62.5	53.5	54.8	63.1
VEHICULAR NOISE	70.5	68.8	65.5	60.9	69.5

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	60.4	58.6	55.4	50.8	59.3

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	70.5		70.5
MIT PK HR LEQ WITH TOPO AND BARRIER =	60.3	*******	60.3
LDN WITHOUT TOPO AND BARRIER =	69.5		69.5
MIT LDN WITH TOPO AND BARRIER =	59.3	*******	59.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT: Radio Square - Santa Barbara
ROADWAY: Carrillo
LOCATION: Unit 208 - Facade (no wall)

JOB #: 1512-06-08
DATE: 15-Sep-06
BY: Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	36		
DIST N/F=	36	AUTO SLE DISTANCE =	37.04
DT WALL=	36	MED TRUCK SLE DIST=	35.85
DT W/OB=	0	HVY TRUCK SLE DIST=	33.40
HTH WALL=	0.0 ********		
OBS HTH=	20.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	69.0	67.1	65.4	59.3	67.9
MEDIUM TRUCKS LEQ	62.6	61.0	54.7	53.1	61.6
HEAVY TRUCKS LEQ	64.5	63.1	54.1	55.3	63.7
VEHICULAR NOISE	71.0	69.3	66.0	61.5	70.0

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	71.0	69.3	66.0	61.5	70.0

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	71.0		71.0
MIT PK HR LEQ WITH TOPO AND BARRIER =	71.0	*******	71.0
LDN WITHOUT TOPO AND BARRIER =	70.0		70.0
MIT LDN WITH TOPO AND BARRIER =	70.0	*******	70.0

NOISE LEVEL ADDITION (dBA)

Unit 214 (Residential) - Roadway + Ralph's Mechanical/Truck Deliveries

balcony (unmitigated)

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	62.3	1,698,243.7
Ralph's Mech+Truck Del.	59.0	794,328.2
Combined Noise Level (dBA)=	64.0	2,492,571.9

balcony (mitigated)

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	52.7	186,208.7
Ralph's Mech+Truck Del.	59.0	794,328.2
Combined Noise Level (dBA)=	59.9	980,536.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 214 - Balcony (no wall)	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	53		
DIST N/F=	24	AUTO SLE DISTANCE =	54.35
DT WALL=	48	MED TRUCK SLE DIST=	53.68
DT W/OB=	5	HVY TRUCK SLE DIST=	52.40
HTH WALL=	0.0 ********		
OBS HTH=	17.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	60.8	59.0	57.2	51.1	59.8
MEDIUM TRUCKS LEQ	55.3	53.8	47.4	45.9	54.4
HEAVY TRUCKS LEQ	57.6	56.2	47.2	48.4	56.8
VEHICULAR NOISE	63.3	61.6	58.0	53.8	62.3

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	63.3	61.6	58.0	53.8	62.3

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	63.3		63.3
MIT PK HR LEQ WITH TOPO AND BARRIER =	63.3	*******	63.3
LDN WITHOUT TOPO AND BARRIER =	62.3		62.3
MIT LDN WITH TOPO AND BARRIER =	62.3	*******	62.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 214 - Balcony (w/wall)	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	53		
DIST N/F=	24	AUTO SLE DISTANCE =	54.49
DT WALL=	48	MED TRUCK SLE DIST=	53.75
DT W/OB=	5	HVY TRUCK SLE DIST=	52.34
HTH WALL=	17.0 (5.0')		
OBS HTH=	17.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	60.8	58.9	57.2	51.1	59.7
MEDIUM TRUCKS LEQ	55.3	53.8	47.4	45.9	54.4
HEAVY TRUCKS LEQ	57.6	56.2	47.2	48.4	56.8
VEHICULAR NOISE	63.3	61.6	58.0	53.8	62.3

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	53.7	52.0	48.4	44.2	52.7

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	63.3		63.3
MIT PK HR LEQ WITH TOPO AND BARRIER =	53.7	*******	53.7
LDN WITHOUT TOPO AND BARRIER =	62.3		62.3
MIT LDN WITH TOPO AND BARRIER =	52.7	*******	52.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 214 - Facade (no wall)	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	48		
DIST N/F=	24	AUTO SLE DISTANCE =	49.49
DT WALL=	48	MED TRUCK SLE DIST=	48.75
DT W/OB=	0	HVY TRUCK SLE DIST=	47.34
HTH WALL=	0.0 ********		
OBS HTH=	17.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	61.3	59.4	57.6	51.5	60.2
MEDIUM TRUCKS LEQ	55.7	54.2	47.9	46.3	54.8
HEAVY TRUCKS LEQ	58.1	56.6	47.6	48.8	57.2
VEHICULAR NOISE	63.7	62.0	58.4	54.2	62.7

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	63.7	62.0	58.4	54.2	62.7

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	63.7		63.7
MIT PK HR LEQ WITH TOPO AND BARRIER =	63.7	*******	63.7
LDN WITHOUT TOPO AND BARRIER =	62.7		62.7
MIT LDN WITH TOPO AND BARRIER =	62.7	*******	62.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	Carrillo	DATE:	15-Sep-06
LOCATION:	Unit 311 - Balcony (no wall)	BY:	Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	55		
DIST N/F=	36	AUTO SLE DISTANCE =	59.51
DT WALL=	50	MED TRUCK SLE DIST=	58.43
DT W/OB=	5	HVY TRUCK SLE DIST=	56.05
HTH WALL=	0.0 ********		
OBS HTH=	29.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	67.0	65.1	63.3	57.3	65.9
MEDIUM TRUCKS LEQ	60.4	58.9	52.6	51.0	59.5
HEAVY TRUCKS LEQ	62.3	60.9	51.8	53.1	61.4
VEHICULAR NOISE	68.9	67.2	63.9	59.4	67.9

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	68.9	67.2	63.9	59.4	67.9

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.9		68.9
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.9	*******	68.9
LDN WITHOUT TOPO AND BARRIER =	67.9		67.9
MIT LDN WITH TOPO AND BARRIER =	67.9	*******	67.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	Carrillo	DATE:	15-Sep-06
LOCATION:	Unit 311 - Balcony (w/wall)	BY:	Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	55		
DIST N/F=	36	AUTO SLE DISTANCE =	59.50
DT WALL=	50	MED TRUCK SLE DIST=	58.36
DT W/OB=	5	HVY TRUCK SLE DIST=	55.85
HTH WALL=	28.0 (4.0' wall)		
OBS HTH=	29.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	67.0	65.1	63.3	57.3	65.9
MEDIUM TRUCKS LEQ	60.4	58.9	52.6	51.0	59.5
HEAVY TRUCKS LEQ	62.3	60.9	51.9	53.1	61.5
VEHICULAR NOISE	68.9	67.2	63.9	59.4	67.9

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	59.4	57.6	54.4	49.8	58.3

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.9		68.9
MIT PK HR LEQ WITH TOPO AND BARRIER =	59.4	*******	59.4
LDN WITHOUT TOPO AND BARRIER =	67.9		67.9
MIT LDN WITH TOPO AND BARRIER =	58.3	*******	58.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT: Radio Square - Santa Barbara
ROADWAY: Carrillo
LOCATION: Unit 311 - Facade (no wall)

JOB #: 1512-06-08
DATE: 15-Sep-06
BY: Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	50		
DIST N/F=	36	AUTO SLE DISTANCE =	54.93
DT WALL=	50	MED TRUCK SLE DIST=	53.75
DT W/OB=	0	HVY TRUCK SLE DIST=	51.15
HTH WALL=	0.0 ********		
OBS HTH=	29.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	67.3	65.4	63.7	57.6	66.2
MEDIUM TRUCKS LEQ	60.8	59.3	52.9	51.4	59.8
HEAVY TRUCKS LEQ	62.7	61.3	52.2	53.5	61.8
VEHICULAR NOISE	69.3	67.5	64.3	59.7	68.3

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	69.3	67.5	64.3	59.7	68.3

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	69.3		69.3
MIT PK HR LEQ WITH TOPO AND BARRIER =	69.3	*******	69.3
LDN WITHOUT TOPO AND BARRIER =	68.3		68.3
MIT LDN WITH TOPO AND BARRIER =	68.3	*******	68.3

NOISE LEVEL ADDITION (dBA)

Unit 311 (Residential) - Roadways + Ralph's Mechanical/Truck Deliveries

Balcony (unmitigated)

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	60.4	1,096,478.2
Carrillo	67.9	6,165,950.0
Combined Noise Level (dBA) =	68.6	7,262,428.2

Balcony (mitigated)

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	52.0	158,489.3
Carrillo	58.3	676,083.0
Combined Noise Level (dBA) =	59.2	834,572.3

at Facade (unmitigated)

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	60.7	1,174,897.6
Carrillo	68.3	6,760,829.8
Combined Noise Level (dBA) =	69.0	7,935,727.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 311 - Balcony (no wall)	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	80		
DIST N/F=	24	AUTO SLE DISTANCE =	82.66
DT WALL=	75	MED TRUCK SLE DIST=	82.02
DT W/OB=	5	HVY TRUCK SLE DIST=	80.69
HTH WALL=	0.0 ********		
OBS HTH=	24.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	59.0	57.1	55.4	49.3	57.9
MEDIUM TRUCKS LEQ	53.5	52.0	45.6	44.1	52.5
HEAVY TRUCKS LEQ	55.7	54.3	45.3	46.5	54.9
VEHICULAR NOISE	61.5	59.7	56.2	51.9	60.4

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	61.5	59.7	56.2	51.9	60.4

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	61.5		61.5
MIT PK HR LEQ WITH TOPO AND BARRIER =	61.5	*******	61.5
LDN WITHOUT TOPO AND BARRIER =	60.4		60.4
MIT LDN WITH TOPO AND BARRIER =	60.4	*******	60.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 311 - Balcony (w/wall)	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	80		
DIST N/F=	24	AUTO SLE DISTANCE =	84.25
DT WALL=	75	MED TRUCK SLE DIST=	83.47
DT W/OB=	5	HVY TRUCK SLE DIST=	81.78
HTH WALL=	28.0 (4.0' wall)		
OBS HTH=	29.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	58.9	57.0	55.3	49.2	57.8
MEDIUM TRUCKS LEQ	53.4	51.9	45.5	44.0	52.4
HEAVY TRUCKS LEQ	55.7	54.3	45.2	46.5	54.8
VEHICULAR NOISE	61.4	59.7	56.1	51.8	60.4

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	53.0	51.3	47.8	43.5	52.0

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	61.4		61.4
MIT PK HR LEQ WITH TOPO AND BARRIER =	53.0	*******	53.0
LDN WITHOUT TOPO AND BARRIER =	60.4		60.4
MIT LDN WITH TOPO AND BARRIER =	52.0	*******	52.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 311 - Facade (no wall)	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	75		
DIST N/F=	24	AUTO SLE DISTANCE =	77.83
DT WALL=	75	MED TRUCK SLE DIST=	77.15
DT W/OB=	0	HVY TRUCK SLE DIST=	75.74
HTH WALL=	0.0 ********		
OBS HTH=	24.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	59.3	57.4	55.6	49.6	58.2
MEDIUM TRUCKS LEQ	53.7	52.2	45.9	44.3	52.8
HEAVY TRUCKS LEQ	56.0	54.6	45.6	46.8	55.2
VEHICULAR NOISE	61.7	60.0	56.4	52.2	60.7

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	61.7	60.0	56.4	52.2	60.7

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	61.7		61.7
MIT PK HR LEQ WITH TOPO AND BARRIER =	61.7	*******	61.7
LDN WITHOUT TOPO AND BARRIER =	60.7		60.7
MIT LDN WITH TOPO AND BARRIER =	60.7	*******	60.7

NOISE LEVEL ADDITION (dBA)

Unit 314 (Residential) - Roadways + Ralph's Mechanical/Truck Deliveries

balcony (unmitigated)

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	63.1	2,041,737.9
Ralph's Mech+Truck Del.	59.0	794,328.2
Combined Noise Level (dBA) =	64.5	2,836,066.2

balcony (mitigated)

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	53.3	213,796.2
Ralph's Mech+Truck Del.	59.0	794,328.2
Combined Noise Level (dBA) =	60.0	1,008,124.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 314 - Balcony (no wall)	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	41		
DIST N/F=	24	AUTO SLE DISTANCE =	45.97
DT WALL=	36	MED TRUCK SLE DIST=	44.81
DT W/OB=	5	HVY TRUCK SLE DIST=	42.34
HTH WALL=	0.0 ********		
OBS HTH=	24.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	61.6	59.7	57.9	51.9	60.5
MEDIUM TRUCKS LEQ	56.1	54.6	48.2	46.7	55.1
HEAVY TRUCKS LEQ	58.5	57.1	48.1	49.3	57.7
VEHICULAR NOISE	64.1	62.4	58.7	54.6	63.1

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	64.1	62.4	58.7	54.6	63.1

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	64.1		64.1
MIT PK HR LEQ WITH TOPO AND BARRIER =	64.1	*******	64.1
LDN WITHOUT TOPO AND BARRIER =	63.1		63.1
MIT LDN WITH TOPO AND BARRIER =	63.1	*******	63.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 314 - Balcony (w/wall)	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	41		
DIST N/F=	24	AUTO SLE DISTANCE =	46.10
DT WALL=	36	MED TRUCK SLE DIST=	44.85
DT W/OB=	5	HVY TRUCK SLE DIST=	42.20
HTH WALL=	23.0 (4.0' wall)		
OBS HTH=	24.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90, RT ANGLE= 90, DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	61.6	59.7	57.9	51.8	60.5
MEDIUM TRUCKS LEQ	56.1	54.6	48.2	46.7	55.1
HEAVY TRUCKS LEQ	58.6	57.1	48.1	49.3	57.7
VEHICULAR NOISE	64.1	62.4	58.7	54.6	63.1

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	54.3	52.6	48.9	44.7	53.3

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	64.1		64.1
MIT PK HR LEQ WITH TOPO AND BARRIER =	54.2	*******	54.2
LDN WITHOUT TOPO AND BARRIER =	63.1		63.1
MIT LDN WITH TOPO AND BARRIER =	53.3	*******	53.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT: Radio Square - Santa Barbara
ROADWAY: De La Vina
LOCATION: Unit 314 - Facade (no wall)

JOB #: 1512-06-08
DATE: 15-Sep-06
BY: Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	36		
DIST N/F=	24	AUTO SLE DISTANCE =	41.57
DT WALL=	36	MED TRUCK SLE DIST=	40.29
DT W/OB=	0	HVY TRUCK SLE DIST=	37.52
HTH WALL=	0.0 ********		
OBS HTH=	24.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	62.0	60.1	58.3	52.3	60.9
MEDIUM TRUCKS LEQ	56.6	55.1	48.7	47.1	55.6
HEAVY TRUCKS LEQ	59.1	57.6	48.6	49.9	58.2
VEHICULAR NOISE	64.5	62.9	59.2	55.0	63.5

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	64.5	62.9	59.2	55.0	63.5

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	64.5		64.5
MIT PK HR LEQ WITH TOPO AND BARRIER =	64.5	*******	64.5
LDN WITHOUT TOPO AND BARRIER =	63.5		63.5
MIT LDN WITH TOPO AND BARRIER =	63.5	*******	63.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	Carrillo	DATE:	15-Sep-06
LOCATION:	Unit 404 - Balcony (no wall)	BY:	Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	53		
DIST N/F=	36	AUTO SLE DISTANCE =	63.91
DT WALL=	48	MED TRUCK SLE DIST=	62.50
DT W/OB=	5	HVY TRUCK SLE DIST=	59.23
HTH WALL=	0.0 ********		
OBS HTH=	40.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	66.7	64.8	63.0	57.0	65.6
MEDIUM TRUCKS LEQ	60.1	58.6	52.3	50.7	59.2
HEAVY TRUCKS LEQ	62.1	60.6	51.6	52.9	61.2
VEHICULAR NOISE	68.6	66.9	63.6	59.1	67.6

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	68.6	66.9	63.6	59.1	67.6

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.6		68.6
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.6	*******	68.6
LDN WITHOUT TOPO AND BARRIER =	67.6		67.6
MIT LDN WITH TOPO AND BARRIER =	67.6	*******	67.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	Carrillo	DATE:	15-Sep-06
LOCATION:	Unit 404 - Balcony (w/wall)	BY:	Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	53		
DIST N/F=	36	AUTO SLE DISTANCE =	63.78
DT WALL=	48	MED TRUCK SLE DIST=	62.33
DT W/OB=	5	HVY TRUCK SLE DIST=	58.97
HTH WALL=	37.5 (2.5')		
OBS HTH=	40.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	66.7	64.8	63.0	57.0	65.6
MEDIUM TRUCKS LEQ	60.1	58.6	52.3	50.7	59.2
HEAVY TRUCKS LEQ	62.1	60.7	51.6	52.9	61.2
VEHICULAR NOISE	68.6	66.9	63.7	59.1	67.6

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	60.0	58.2	55.0	50.4	58.9

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.6		68.6
MIT PK HR LEQ WITH TOPO AND BARRIER =	60.0	*******	60.0
LDN WITHOUT TOPO AND BARRIER =	67.6		67.6
MIT LDN WITH TOPO AND BARRIER =	58.9	*******	58.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	Carrillo	DATE:	15-Sep-06
LOCATION:	Unit 404 - Facade (no wall)	BY:	Mike Rosa

ADT =	35,400	PK HR VOL =	3,540
SPEED =	30		
PK HR % =	10		
CTL DIST=	62		
DIST N/F=	36	AUTO SLE DISTANCE =	71.55
DT WALL=	48	MED TRUCK SLE DIST=	70.29
DT W/OB=	14	HVY TRUCK SLE DIST=	67.40
HTH WALL=	0.0 ********		
OBS HTH=	40.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	66.2	64.3	62.5	56.5	65.1
MEDIUM TRUCKS LEQ	59.6	58.1	51.8	50.2	58.7
HEAVY TRUCKS LEQ	61.5	60.1	51.0	52.3	60.6
VEHICULAR NOISE	68.1	66.4	63.1	58.6	67.1

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	68.1	66.4	63.1	58.6	67.1

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.1		68.1
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.1	*******	68.1
LDN WITHOUT TOPO AND BARRIER =	67.1		67.1
MIT LDN WITH TOPO AND BARRIER =	67.1	*******	67.1

NOISE LEVEL ADDITION (dBA)

Unit 405 (Residential) - Roadway + Ralph's Mechanical/Truck Deliveries

balcony (unmitigated)

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	62.5	1,778,279.4
Ralph's Mech+Truck Del.	59.0	794,328.2
Combined Noise Level (dBA) =	64.1	2,572,607.6

balcony (mitigated)

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	51.5	141,253.8
Ralph's Mech+Truck Del.	59.0	794,328.2
Combined Noise Level (dBA) =	59.7	935,582.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 405 - Balcony (no wall)	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	41		
DIST N/F=	24	AUTO SLE DISTANCE =	52.55
DT WALL=	36	MED TRUCK SLE DIST=	51.05
DT W/OB=	5	HVY TRUCK SLE DIST=	47.60
HTH WALL=	0.0 ********		
OBS HTH=	35.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	61.0	59.1	57.3	51.3	59.9
MEDIUM TRUCKS LEQ	55.5	54.0	47.7	46.1	54.6
HEAVY TRUCKS LEQ	58.0	56.6	47.6	48.8	57.2
VEHICULAR NOISE	63.5	61.8	58.2	54.0	62.5

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	63.5	61.8	58.2	54.0	62.5

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	63.5		63.5
MIT PK HR LEQ WITH TOPO AND BARRIER =	63.5	*******	63.5
LDN WITHOUT TOPO AND BARRIER =	62.5		62.5
MIT LDN WITH TOPO AND BARRIER =	62.5	*******	62.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT:	Radio Square - Santa Barbara	JOB #:	1512-06-08
ROADWAY:	De La Vina	DATE:	15-Sep-06
LOCATION:	Unit 405 - Balcony (w/wall)	BY:	Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	41		
DIST N/F=	24	AUTO SLE DISTANCE =	56.34
DT WALL=	36	MED TRUCK SLE DIST=	54.64
DT W/OB=	5	HVY TRUCK SLE DIST=	50.68
HTH WALL=	38.0 (3.0' wall)		
OBS HTH=	40.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE= -90		
	RT ANGLE= 90		
	DF ANGLE= 180		

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	60.7	58.8	57.0	51.0	59.6
MEDIUM TRUCKS LEQ	55.2	53.7	47.4	45.8	54.3
HEAVY TRUCKS LEQ	57.8	56.3	47.3	48.6	56.9
VEHICULAR NOISE	63.2	61.5	57.9	53.7	62.2

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	52.5	50.8	47.1	43.0	51.5

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	63.2		63.2
MIT PK HR LEQ WITH TOPO AND BARRIER =	52.5	*******	52.5
LDN WITHOUT TOPO AND BARRIER =	62.2		62.2
MIT LDN WITH TOPO AND BARRIER =	51.5	*******	51.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL(MODIFIED FOR Ldn) - (CALVENO)
SANTA BARBARA

PROJECT: Radio Square - Santa Barbara
ROADWAY: De La Vina
LOCATION: Unit 405 - Facade (no wall)

JOB #: 1512-06-08
DATE: 15-Sep-06
BY: Mike Rosa

ADT =	13,300	PK HR VOL =	1,330
SPEED =	25		
PK HR % =	10		
CTL DIST=	46		
DIST N/F=	24	AUTO SLE DISTANCE =	56.54
DT WALL=	36	MED TRUCK SLE DIST=	55.15
DT W/OB=	10	HVY TRUCK SLE DIST=	51.97
HTH WALL=	0.0 ********		
OBS HTH=	35.0		
AMBIENT=	0.0		

ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10		
MEDIUM TRUCKS =	10	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	1 (0=WALL,1=BERM)		
PAD EL =	0.0	EL AUTOMOBILES =	0.0
ROAD EL =	0.0	EL MEDIUM TRUCKS=	2.3
GRADE =	0.1 %	EL HEAVY TRUCKS =	8.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE IMPACTS WITHOUT TOPO OR BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
AUTOMOBILES LEQ	60.7	58.8	57.0	51.0	59.6
MEDIUM TRUCKS LEQ	55.2	53.7	47.3	45.8	54.2
HEAVY TRUCKS LEQ	57.7	56.2	47.2	48.4	56.8
VEHICULAR NOISE	63.2	61.5	57.8	53.7	62.2

NOISE IMPACTS WITH TOPO AND BARRIER SHIELDING

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN
VEHICULAR NOISE	63.2	61.5	57.8	53.7	62.2

	W/O AMBIENT		W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	63.2		63.2
MIT PK HR LEQ WITH TOPO AND BARRIER =	63.2	*******	63.2
LDN WITHOUT TOPO AND BARRIER =	62.2		62.2
MIT LDN WITH TOPO AND BARRIER =	62.2	*******	62.2

Appendix C

Stationary Noise Source Calculations

Barrier at Balcony Only

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	1st Floor - Unit 104	BY:	Mike Rosa

OBS DIST= 89.0
DT WALL= 84.0
DT W/OB= 5.0
HTH WALL= 0.0 ********
BARRIER = 0.0 (0=WALL,1=BERM)
OBS HTH= 5.0
NOISE HTH= 14.0
OBS EL = 0.0
NOISE EL = 0.0
DROP-OFF= 20.0 (20 = 6 dBA PER DOUBLING OF DISTANCE)
COFF

BARRIER+
TOPO SHIELDING = 0.00
NOISE HTH EL= 14.0

NOISE LEVELS (dBA)

	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	89	60.7	-19.0	-19.0	-19.0	-19.0	-19.0
SHIELDING	89	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	89	60.7	-19.0	-19.0	-19.0	-19.0	-19.0

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	1st Floor - Unit 104 w/wall @ balcony	BY:	Mike Rosa

OBS DIST=	89.0		
DT WALL=	84.0		
DT W/OB=	5.0		
HTH WALL=	6.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-5.90
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	89	60.7	-19.0	-19.0	-19.0	-19.0	-19.0
SHIELDING	89	-5.9	-5.9	-5.9	-5.9	-5.9	-5.9
ADJ LEVEL	89	54.8	-24.9	-24.9	-24.9	-24.9	-24.9

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 204	BY:	Mike Rosa

OBS DIST= 51.0
DT WALL= 46.0
DT W/OB= 5.0
HTH WALL= 0.0 ********
BARRIER = 0.0 (0=WALL,1=BERM)
OBS HTH= 5.0
NOISE HTH= 2.0 BARRIER+
OBS EL = 15.0 TOPO SHIELDING = 0.00
NOISE EL = 12.0 NOISE HTH EL= 14.0
DROP-OFF= 20.0 (20 = 6 dBA PER DOUBLING OF DISTANCE)
COFF

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	51	65.5	-14.2	-14.2	-14.2	-14.2	-14.2
SHIELDING	51	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	51	65.5	-14.2	-14.2	-14.2	-14.2	-14.2

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 204 w/wall @ balcony	BY:	Mike Rosa

OBS DIST=	51.0		
DT WALL=	46.0		
DT W/OB=	5.0		
HTH WALL=	6.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	15.0	TOPO SHIELDING =	-8.30
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	51	65.5	-14.2	-14.2	-14.2	-14.2	-14.2
SHIELDING	51	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3
ADJ LEVEL	51	57.2	-22.5	-22.5	-22.5	-22.5	-22.5

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 105R	BY:	Mike Rosa

OBS DIST=	21.0		
DT WALL=	16.0		
DT W/OB=	5.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	15.0	TOPO SHIELDING =	0.00
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	21	73.3	-6.4	-6.4	-6.4	-6.4	-6.4
SHIELDING	21	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	21	73.3	-6.4	-6.4	-6.4	-6.4	-6.4

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 105R w/wall @ balcony	BY:	Mike Rosa

OBS DIST=	21.0		
DT WALL=	16.0		
DT W/OB=	5.0		
HTH WALL=	11.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	15.0	TOPO SHIELDING =	-15.70
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL 10	79.7					
PROJ LEVEL 21	73.3	-6.4	-6.4	-6.4	-6.4	-6.4
SHIELDING 21	-15.7	-15.7	-15.7	-15.7	-15.7	-15.7
ADJ LEVEL 21	57.6	-22.1	-22.1	-22.1	-22.1	-22.1

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 107R	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	14.0		
DT W/OB=	5.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	15.0	TOPO SHIELDING =	0.00
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

NOISE LEVELS (dBA)

	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6
SHIELDING	19	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 107R	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	14.0		
DT W/OB=	5.0		
HTH WALL=	12.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	15.0	TOPO SHIELDING =	-16.60
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6
SHIELDING	19	-16.6	-16.6	-16.6	-16.6	-16.6	-16.6
ADJ LEVEL	19	57.5	-22.2	-22.2	-22.2	-22.2	-22.2

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 304	BY:	Mike Rosa

OBS DIST=	85.0		
DT WALL=	80.0		
DT W/OB=	5.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+ TOPO SHIELDING =	0.00
OBS EL =	26.0	NOISE HTH EL=	14.0
NOISE EL =	12.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6
SHIELDING	85	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 304 w/wall @ balcony	BY:	Mike Rosa

OBS DIST=	85.0		
DT WALL=	80.0		
DT W/OB=	5.0		
HTH WALL=	5.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	26.0	TOPO SHIELDING =	-6.00
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)			
DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL 10	79.7					
PROJ LEVEL 85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6
SHIELDING 85	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0
ADJ LEVEL 85	55.1	-24.6	-24.6	-24.6	-24.6	-24.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 305	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	14.0		
DT W/OB=	5.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+ TOPO SHIELDING =	0.00
OBS EL =	26.0	NOISE HTH EL=	14.0
NOISE EL =	12.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6
SHIELDING	19	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 305 (w/wall @ balcony)	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	14.0		
DT W/OB=	5.0		
HTH WALL=	9.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	26.0	TOPO SHIELDING =	-15.70
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

NOISE LEVELS (dBA)

	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6
SHIELDING	19	-15.7	-15.7	-15.7	-15.7	-15.7	-15.7
ADJ LEVEL	19	58.4	-21.3	-21.3	-21.3	-21.3	-21.3

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 307	BY:	Mike Rosa

OBS DIST=	25.0		
DT WALL=	20.0		
DT W/OB=	5.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	26.0	TOPO SHIELDING =	0.00
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)			
DIST (FT)		CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	25	71.7	-8.0	-8.0	-8.0	-8.0	-8.0
SHIELDING	25	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	25	71.7	-8.0	-8.0	-8.0	-8.0	-8.0

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 307 w/wall @ balcony	BY:	Mike Rosa

OBS DIST=	25.0		
DT WALL=	20.0		
DT W/OB=	5.0		
HTH WALL=	8.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	26.0	TOPO SHIELDING =	-14.20
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	25	71.7	-8.0	-8.0	-8.0	-8.0	-8.0
SHIELDING	25	-14.2	-14.2	-14.2	-14.2	-14.2	-14.2
ADJ LEVEL	25	57.5	-22.2	-22.2	-22.2	-22.2	-22.2

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	4th Floor - Unit 402	BY:	Mike Rosa

OBS DIST=	85.0		
DT WALL=	80.0		
DT W/OB=	5.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	37.0	TOPO SHIELDING =	0.00
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)			
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6
SHIELDING	85	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	4th Floor - Unit 402 w/wall @ balcony	BY:	Mike Rosa

OBS DIST= 85.0
DT WALL= 80.0
DT W/OB= 5.0
HTH WALL= 5.0 ********
BARRIER = 0.0 (0=WALL,1=BERM)
OBS HTH= 5.0
NOISE HTH= 2.0 BARRIER+
OBS EL = 37.0 TOPO SHIELDING = -7.10
NOISE EL = 12.0 NOISE HTH EL= 14.0
DROP-OFF= 20.0 (20 = 6 dBA PER DOUBLING OF DISTANCE)
COFF

		NOISE LEVELS (dBA)				
DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL 10	79.7					
PROJ LEVEL 85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6
SHIELDING 85	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1
ADJ LEVEL 85	54.0	-25.7	-25.7	-25.7	-25.7	-25.7

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	4th Floor - Unit 403	BY:	Mike Rosa

OBS DIST=	48.0		
DT WALL=	43.0		
DT W/OB=	5.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+ TOPO SHIELDING =	0.00
OBS EL =	37.0	NOISE HTH EL=	14.0
NOISE EL =	12.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)			
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	48	66.1	-13.6	-13.6	-13.6	-13.6	-13.6
SHIELDING	48	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	48	66.1	-13.6	-13.6	-13.6	-13.6	-13.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	4th Floor - Unit 403 w/wall @ balcony	BY:	Mike Rosa

OBS DIST=	48.0		
DT WALL=	43.0		
DT W/OB=	5.0		
HTH WALL=	5.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	2.0	BARRIER+	
OBS EL =	37.0	TOPO SHIELDING =	-9.30
NOISE EL =	12.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)			
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	48	66.1	-13.6	-13.6	-13.6	-13.6	-13.6
SHIELDING	48	-9.3	-9.3	-9.3	-9.3	-9.3	-9.3
ADJ LEVEL	48	56.8	-22.9	-22.9	-22.9	-22.9	-22.9

Barrier at HVAC Unit Only

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	1st Floor - Unit 104	BY:	Mike Rosa

OBS DIST=	89.0		
DT WALL=	1.0		
DT W/OB=	88.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	14.0	BARRIER+ TOPO SHIELDING =	0.00
OBS EL =	0.0	NOISE HTH EL=	14.0
NOISE EL =	0.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	89	60.7	-19.0	-19.0	-19.0	-19.0	-19.0
SHIELDING	89	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	89	60.7	-19.0	-19.0	-19.0	-19.0	-19.0

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	1st Floor - Unit 104 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	89.0		
DT WALL=	1.0		
DT W/OB=	88.0		
HTH WALL=	24.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-17.30
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL 10	79.7					
PROJ LEVEL 89	60.7	-19.0	-19.0	-19.0	-19.0	-19.0
SHIELDING 89	-17.3	-17.3	-17.3	-17.3	-17.3	-17.3
ADJ LEVEL 89	43.4	-36.3	-36.3	-36.3	-36.3	-36.3

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 204	BY:	Mike Rosa

OBS DIST=	51.0		
DT WALL=	1.0		
DT W/OB=	50.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	20.0		
NOISE HTH=	14.0	BARRIER+ TOPO SHIELDING =	0.00
OBS EL =	0.0	NOISE HTH EL=	14.0
NOISE EL =	0.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

	DIST (FT)	CNEL	NOISE LEVELS (dBA) Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	51	65.5	-14.2	-14.2	-14.2	-14.2	-14.2
SHIELDING	51	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	51	65.5	-14.2	-14.2	-14.2	-14.2	-14.2

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 204 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST= 51.0
DT WALL= 1.0
DT W/OB= 50.0
HTH WALL= 24.0 ********
BARRIER = 0.0 (0=WALL,1=BERM)
OBS HTH= 20.0
NOISE HTH= 14.0
OBS EL = 0.0
NOISE EL = 0.0
DROP-OFF= 20.0 (20 = 6 dBA PER DOUBLING OF DISTANCE)
COFF

BARRIER+
TOPO SHIELDING = -16.60
NOISE HTH EL= 14.0

NOISE LEVELS (dBA)

	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	51	65.5	-14.2	-14.2	-14.2	-14.2	-14.2
SHIELDING	51	-16.6	-16.6	-16.6	-16.6	-16.6	-16.6
ADJ LEVEL	51	48.9	-30.8	-30.8	-30.8	-30.8	-30.8

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 105R	BY:	Mike Rosa

OBS DIST=	21.0		
DT WALL=	1.0		
DT W/OB=	20.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	20.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	0.00
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	21	73.3	-6.4	-6.4	-6.4	-6.4	-6.4
SHIELDING	21	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	21	73.3	-6.4	-6.4	-6.4	-6.4	-6.4

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 105R w/wall @ HVAC	BY:	Mike Rosa

OBS DIST= 21.0
DT WALL= 1.0
DT W/OB= 20.0
HTH WALL= 24.0 ********
BARRIER = 0.0 (0=WALL,1=BERM)
OBS HTH= 20.0
NOISE HTH= 14.0 BARRIER+
OBS EL = 0.0 TOPO SHIELDING = -16.60
NOISE EL = 0.0 NOISE HTH EL= 14.0
DROP-OFF= 20.0 (20 = 6 dBA PER DOUBLING OF DISTANCE)
COFF

		NOISE LEVELS (dBA)				
DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL 10	79.7					
PROJ LEVEL 21	73.3	-6.4	-6.4	-6.4	-6.4	-6.4
SHIELDING 21	-16.6	-16.6	-16.6	-16.6	-16.6	-16.6
ADJ LEVEL 21	56.7	-23.0	-23.0	-23.0	-23.0	-23.0

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 107R	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	1.0		
DT W/OB=	18.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	20.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	0.00
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6
SHIELDING	19	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 107R w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	1.0		
DT W/OB=	18.0		
HTH WALL=	24.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	20.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-16.60
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6
SHIELDING	19	-16.6	-16.6	-16.6	-16.6	-16.6	-16.6
ADJ LEVEL	19	57.5	-22.2	-22.2	-22.2	-22.2	-22.2

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 304	BY:	Mike Rosa

OBS DIST=	85.0		
DT WALL=	1.0		
DT W/OB=	84.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	31.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	0.00
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

	DIST (FT)	NOISE LEVELS (dBA) CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6
SHIELDING	85	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 304 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	85.0		
DT WALL=	1.0		
DT W/OB=	84.0		
HTH WALL=	24.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	31.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-16.10
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL 10	79.7					
PROJ LEVEL 85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6
SHIELDING 85	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1
ADJ LEVEL 85	45.0	-34.7	-34.7	-34.7	-34.7	-34.7

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 305	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	1.0		
DT W/OB=	18.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	4.0	BARRIER+	
OBS EL =	26.0	TOPO SHIELDING =	-9.10
NOISE EL =	20.0	NOISE HTH EL=	24.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6
SHIELDING	19	-9.1	-9.1	-9.1	-9.1	-9.1	-9.1
ADJ LEVEL	19	65.0	-14.7	-14.7	-14.7	-14.7	-14.7

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 305 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	1.0		
DT W/OB=	18.0		
HTH WALL=	24.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	31.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-14.20
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

NOISE LEVELS (dBA)

	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6
SHIELDING	19	-14.2	-14.2	-14.2	-14.2	-14.2	-14.2
ADJ LEVEL	19	59.9	-19.8	-19.8	-19.8	-19.8	-19.8

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 307	BY:	Mike Rosa

OBS DIST=	25.0		
DT WALL=	1.0		
DT W/OB=	24.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	31.0		
NOISE HTH=	14.0	BARRIER+ TOPO SHIELDING =	0.00
OBS EL =	0.0	NOISE HTH EL=	14.0
NOISE EL =	0.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

	DIST (FT)	CNEL	NOISE LEVELS (dBA) Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	25	71.7	-8.0	-8.0	-8.0	-8.0	-8.0
SHIELDING	25	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	25	71.7	-8.0	-8.0	-8.0	-8.0	-8.0

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 307 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	25.0		
DT WALL=	1.0		
DT W/OB=	24.0		
HTH WALL=	24.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	31.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-14.90
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL 10	79.7					
PROJ LEVEL 25	71.7	-8.0	-8.0	-8.0	-8.0	-8.0
SHIELDING 25	-14.9	-14.9	-14.9	-14.9	-14.9	-14.9
ADJ LEVEL 25	56.8	-22.9	-22.9	-22.9	-22.9	-22.9

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	4th Floor - Unit 402	BY:	Mike Rosa

OBS DIST=	85.0		
DT WALL=	1.0		
DT W/OB=	84.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	42.0		
NOISE HTH=	14.0	BARRIER+ TOPO SHIELDING =	0.00
OBS EL =	0.0	NOISE HTH EL=	14.0
NOISE EL =	0.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

	DIST (FT)	CNEL	NOISE LEVELS (dBA) Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6
SHIELDING	85	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	4th Floor - Unit 402 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	85.0		
DT WALL=	1.0		
DT W/OB=	84.0		
HTH WALL=	24.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	42.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-15.70
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)			
DIST (FT)		CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6
SHIELDING	85	-15.7	-15.7	-15.7	-15.7	-15.7	-15.7
ADJ LEVEL	85	45.4	-34.3	-34.3	-34.3	-34.3	-34.3

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	4th Floor - Unit 403	BY:	Mike Rosa

OBS DIST=	48.0		
DT WALL=	1.0		
DT W/OB=	47.0		
HTH WALL=	0.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	42.0		
NOISE HTH=	14.0	BARRIER+ TOPO SHIELDING =	0.00
OBS EL =	0.0	NOISE HTH EL=	14.0
NOISE EL =	0.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

	DIST (FT)	CNEL	NOISE LEVELS (dBA) Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	48	66.1	-13.6	-13.6	-13.6	-13.6	-13.6
SHIELDING	48	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	48	66.1	-13.6	-13.6	-13.6	-13.6	-13.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	4th Floor - Unit 403 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	48.0		
DT WALL=	1.0		
DT W/OB=	47.0		
HTH WALL=	24.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	42.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-14.90
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)			
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	48	66.1	-13.6	-13.6	-13.6	-13.6	-13.6
SHIELDING	48	-14.9	-14.9	-14.9	-14.9	-14.9	-14.9
ADJ LEVEL	48	51.2	-28.5	-28.5	-28.5	-28.5	-28.5

Barrier at Combination of HVAC Unit and Balcony

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	1st Floor - Unit 104 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	89.0		
DT WALL=	1.0		
DT W/OB=	88.0		
HTH WALL=	18.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-14.40
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

NOISE LEVELS (dBA)

	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	89	60.7	-19.0	-19.0	-19.0	-19.0	-19.0
SHIELDING	89	-14.4	-14.4	-14.4	-14.4	-14.4	-14.4
ADJ LEVEL	89	46.3	-33.4	-33.4	-33.4	-33.4	-33.4

6.5' @ HVAC

0' @ balcony

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 204 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	51.0		
DT WALL=	1.0		
DT W/OB=	50.0		
HTH WALL=	18.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	20.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-13.70
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL 10	79.7					
PROJ LEVEL 51	65.5	-14.2	-14.2	-14.2	-14.2	-14.2
SHIELDING 51	-13.7	-13.7	-13.7	-13.7	-13.7	-13.7
ADJ LEVEL 51	51.8	-27.9	-27.9	-27.9	-27.9	-27.9

6.5' @ HVAC

0' @ balcony

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 105R w/wall @ combo	BY:	Mike Rosa

OBS DIST=	21.0		
DT WALL=	16.0		
DT W/OB=	5.0		
HTH WALL=	6.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	14.0	BARRIER+ TOPO SHIELDING =	-9.30
OBS EL =	15.0	NOISE HTH EL=	14.0
NOISE EL =	0.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

	DIST (FT)	CNEL	NOISE LEVELS (dBA) Lmax	L2	L8	L25	L50
REF LEVEL	21	60.1					
PROJ LEVEL	21	60.1	0.0	0.0	0.0	0.0	0.0
SHIELDING	21	-9.3	-9.3	-9.3	-9.3	-9.3	-9.3
ADJ LEVEL	21	50.8	-9.3	-9.3	-9.3	-9.3	-9.3

6.5' @ HVAC

6.0 @ balcony

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 105R w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	21.0		
DT WALL=	1.0		
DT W/OB=	20.0		
HTH WALL=	18.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	20.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-13.20
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL 10	79.7					
PROJ LEVEL 21	73.3	-6.4	-6.4	-6.4	-6.4	-6.4
SHIELDING 21	-13.2	-13.2	-13.2	-13.2	-13.2	-13.2
ADJ LEVEL 21	60.1	-19.6	-19.6	-19.6	-19.6	-19.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 107R w/wall @ combo	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	14.0		
DT W/OB=	5.0		
HTH WALL=	6.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	14.0	BARRIER+ TOPO SHIELDING =	-9.60
OBS EL =	15.0	NOISE HTH EL=	14.0
NOISE EL =	0.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

	DIST (FT)	CNEL	NOISE LEVELS (dBA) Lmax	L2	L8	L25	L50
REF LEVEL	19	61.0					
PROJ LEVEL	19	61.0	0.0	0.0	0.0	0.0	0.0
SHIELDING	19	-9.6	-9.6	-9.6	-9.6	-9.6	-9.6
ADJ LEVEL	19	51.4	-9.6	-9.6	-9.6	-9.6	-9.6

6.5' @ HVAC

6.0' @ balcony

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	2nd Floor - Unit 107R w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	1.0		
DT W/OB=	18.0		
HTH WALL=	18.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	20.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-13.10
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)			
DIST (FT)		CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6
SHIELDING	19	-13.1	-13.1	-13.1	-13.1	-13.1	-13.1
ADJ LEVEL	19	61.0	-18.7	-18.7	-18.7	-18.7	-18.7

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 304 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	85.0		
DT WALL=	1.0		
DT W/OB=	84.0		
HTH WALL=	18.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	31.0		
NOISE HTH=	14.0	BARRIER+ TOPO SHIELDING =	-13.20
OBS EL =	0.0	NOISE HTH EL=	14.0
NOISE EL =	0.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6
SHIELDING	85	-13.2	-13.2	-13.2	-13.2	-13.2	-13.2
ADJ LEVEL	85	47.9	-31.8	-31.8	-31.8	-31.8	-31.8

6.5' @ HVAC

0' @ balcony

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 305 (w/wall @ combo)	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	14.0		
DT W/OB=	5.0		
HTH WALL=	4.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	26.0	TOPO SHIELDING =	-9.70
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

NOISE LEVELS (dBA)

	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	19	63.9					
PROJ LEVEL	19	63.9	0.0	0.0	0.0	0.0	0.0
SHIELDING	19	-9.7	-9.7	-9.7	-9.7	-9.7	-9.7
ADJ LEVEL	19	54.2	-9.7	-9.7	-9.7	-9.7	-9.7

6.5' @ HVAC

4.0' @ balcony

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 305 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	19.0		
DT WALL=	1.0		
DT W/OB=	18.0		
HTH WALL=	18.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	31.0		
NOISE HTH=	14.0	BARRIER+ TOPO SHIELDING =	-10.20
OBS EL =	0.0	NOISE HTH EL=	14.0
NOISE EL =	0.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	19	74.1	-5.6	-5.6	-5.6	-5.6	-5.6
SHIELDING	19	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
ADJ LEVEL	19	63.9	-15.8	-15.8	-15.8	-15.8	-15.8

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 307 w/wall @ combo	BY:	Mike Rosa

OBS DIST=	25.0		
DT WALL=	20.0		
DT W/OB=	5.0		
HTH WALL=	4.0	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	5.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	26.0	TOPO SHIELDING =	-8.30
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)			
DIST (FT)		CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	25	62.2					
PROJ LEVEL	25	62.2	0.0	0.0	0.0	0.0	0.0
SHIELDING	25	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3
ADJ LEVEL	25	53.9	-8.3	-8.3	-8.3	-8.3	-8.3

6.5' @ HVAC

4.0' @ balcony

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	3rd Floor - Unit 307 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	25.0		
DT WALL=	1.0		
DT W/OB=	24.0		
HTH WALL=	18.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	31.0		
NOISE HTH=	14.0	BARRIER+ TOPO SHIELDING =	-11.20
OBS EL =	0.0	NOISE HTH EL=	14.0
NOISE EL =	0.0		
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	25	71.7	-8.0	-8.0	-8.0	-8.0	-8.0
SHIELDING	25	-11.2	-11.2	-11.2	-11.2	-11.2	-11.2
ADJ LEVEL	25	60.5	-19.2	-19.2	-19.2	-19.2	-19.2

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	4th Floor - Unit 402 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST=	85.0		
DT WALL=	1.0		
DT W/OB=	84.0		
HTH WALL=	18.5	********	
BARRIER =	0.0	(0=WALL,1=BERM)	
OBS HTH=	42.0		
NOISE HTH=	14.0	BARRIER+	
OBS EL =	0.0	TOPO SHIELDING =	-12.60
NOISE EL =	0.0	NOISE HTH EL=	14.0
DROP-OFF=	20.0	(20 = 6 dBA PER DOUBLING OF DISTANCE)	
COFF			

		NOISE LEVELS (dBA)				
DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL 10	79.7					
PROJ LEVEL 85	61.1	-18.6	-18.6	-18.6	-18.6	-18.6
SHIELDING 85	-12.6	-12.6	-12.6	-12.6	-12.6	-12.6
ADJ LEVEL 85	48.5	-31.2	-31.2	-31.2	-31.2	-31.2

6.5' @ HVAC

0.' @ balcony

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT:	Radio Square	JOB #:	1512-06-08
SOURCE:	Save-On HVAC Noise	DATE:	31-Aug-06
LOCATION:	4th Floor - Unit 403 w/wall @ HVAC	BY:	Mike Rosa

OBS DIST= 48.0
DT WALL= 1.0
DT W/OB= 47.0
HTH WALL= 18.5 ********
BARRIER = 0.0 (0=WALL,1=BERM)
OBS HTH= 42.0
NOISE HTH= 14.0
OBS EL = 0.0
NOISE EL = 0.0
DROP-OFF= 20.0 (20 = 6 dBA PER DOUBLING OF DISTANCE)
COFF

BARRIER+
TOPO SHIELDING = -11.40
NOISE HTH EL= 14.0

			NOISE LEVELS (dBA)				
	DIST (FT)	CNEL	Lmax	L2	L8	L25	L50
REF LEVEL	10	79.7					
PROJ LEVEL	48	66.1	-13.6	-13.6	-13.6	-13.6	-13.6
SHIELDING	48	-11.4	-11.4	-11.4	-11.4	-11.4	-11.4
ADJ LEVEL	48	54.7	-25.0	-25.0	-25.0	-25.0	-25.0

6.5' @ HVAC

0' @ balcony

Distance Conversion Calculations

NOISE LEVEL ADDITION (dBA)

Ralph's Louvers + Truck Delivery

Unmitigated

Street Name	Noise Level (dBA)	10^dBA/10
De La Vina	65.0	3,162,277.7
Ralph's louvers+Truck Del.	59.0	794,328.2
Combined Noise Level (dBA) =	66.0	3,956,605.9

Total Combined Noise Impacts to			
Unmitigated	N/A	N/A	N/A
66.0	N/A	N/A	N/A

CNEL CALCULATED FROM SITE MEASUREMENTS

PROJECT: Radio Square Santa Barbara Prelim Review
LOCATION: HVAC unit on Sav-On roof top

DATE: 11-Aug-06
JN: 1512-06-08

TIME BEGINNING	HOURLY LEQ		HOURLY LEQ WEIGHTING	ADJUSTED HOURLY LEQ
0000	73.0	*	10.0	83.0
0100	73.0		10.0	83.0
0200	73.0		10.0	83.0
0300	73.0		10.0	83.0
0400	73.0		10.0	83.0
0500	73.0		10.0	83.0
0600	73.0		10.0	83.0
0700	73.0		0.0	73.0
0800	73.0		0.0	73.0
0900	73.0		0.0	73.0
1000	73.0		0.0	73.0
1100	73.0		0.0	73.0
1200	73.0		0.0	73.0
1300	73.0		0.0	73.0
1400	73.0		0.0	73.0
1500	73.0		0.0	73.0
1600	73.0		0.0	73.0
1700	73.0		0.0	73.0
1800	73.0		0.0	73.0
1900	73.0		5.0	78.0
2000	73.0		5.0	78.0
2100	73.0		5.0	78.0
2200	73.0		10.0	83.0
2300	73.0		10.0	83.0
				79.7 CNEL (dBA)

HR. MEASURED: (24 hour operation) *
MEASURED LEQ: 73.0 *

Worst case using maximum noise monitor results at 24 hour a day operation.

TABLE II
EXISTING AMBIENT NOISE LEVELS

Monitoring Site[1]	Monitored Leq (dBA)	Ldn / CNEL @ Project Property Line	Major Noise Source
Carrillo Street	67 dBA	68 Ldn	Vehicle noise from Carrillo Street
De La Vina Street	65 dBA	66 Ldn	Vehicle noise from De La Vina Street
De La Vina Street	59 dBA	66 CNEL	Mechanical louvers in the building façade of the Ralph's Grocery store
Alley, West of Site	70 to 73 dBA	77 to 80 CNEL	Rooftop unit at the Savon's Drug store

[1] All measurements were taken at or near the project's site property line.